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ABSTRACT

This document summarizes 174 research and development activities in agricultural education that were completed between July 1, 1983, and June 30, 1984. The projects, which are listed by state, represent research and development efforts undertaken at 33 institutions in 30 states and include 86 master's studies or theses, 39 doctoral dissertations, and 49 funded or unfunded staff project studies. Each project summary contains the names of the individual or individuals primarily responsible for the project, a project title, information concerning the type of project, the sponsoring institution, and an abstract. Also included in the document are a list of 222 studies or projects in progress during the period under examination, a list of ERIC document numbers for previous regional and national summaries, a list of previous national editors, an author index, and a subject index. (MN)

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1983-1984

Summaries of

Research and Development Activities

in

Agricultural Education

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Blacksburg, Virginia

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SUMMARIES OF RESEARCH AND DEVELOPMENT ACTIVITIES IN AGRICULTURAL EDUCATION

in the

United States of America

1983-1984

Compiled and Edited

by

William G. Camp

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February, 1985

PREFACE

This document is the ninth annual Summaries of Research and Development Activities in Agricultural Education in the United States. Section 1 lists 174 abstracts representing studies and developmental projects completed between July 1, 1983 and June 30, 1984. Of the total, 86 are reports on master's studies or theses, 39 are doctoral dissertations, and 49 are funded or unfunded staff studies. In addition to the summaries of completed work, there is a section listing 222 studies or projects in progress. A total of 33 institutions in 30 states are represented in the document. In addition, 20 institutions responded to the survey and indicated no research and development activities during 1983-1984.

In each section the entries are listed alphabetically by state, and within states they are listed alphabetically by author name. A subject index and an author index are included at the end of the document. In addition, lists of past national editors and ERIC accession numbers for all previous editions of this document are provided. The reader should note that entries for this publication are submitted in camera-ready form. Responsibility for proofreading and accuracy belongs to the individual contributor.

This publication is an activity of the Research Committee of the Agricultural Education Division, American Vocational Association (AVA). It is funded by AVA monies and is provided at no charge to each head teacher educator and each head state supervisor of agricultural education. Additional copies are provided on an advance-order basis at $6.00 each prepaid or $7.00 billed. A limited number of copies are available for purchase at those prices from the address on the inside cover page.

The editor acknowledges and expresses gratitude to all of those individuals who assisted with this effort and who contributed items included in the document. Special thanks are due to Dr. Joe W. Kotrlik, past editor for his suggestions and guidance; to Dr. John R. Crunkilton, Program Area Leader, Agricultural Education, Virginia Tech for his support of this activity; to Mrs. Doris Smith, Secretary, Agricultural Education, for her assistance in typing parts of the document, and to Dr. Al Mannebach, Chair of the Agricultural Education Division Research Committee.

William G. Camp
Editor

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ABSTRACTS OF RESEARCH AND DEVELOPMENT

ACTIVITIES COMPLETED, 1983-84

ARIZONA

Bia, Johnson. (1984). Agricultural-related issues on the Navajo Nation. Master of Science Thesis, The University of Arizona, Tucson.

The purposes of this study were: (1) to establish information pertaining to perceptions of members of the Navajo Tribal Council regarding selected agricultural-related issues which were deemed, by a jury of experts, to have significant implications on the future agricultural policies, practices, improvements and developments on the Navajo Nation; and (2) to establish information pertaining to the educational and agricultural-related background of members of the Navajo Tribal Council. The Navajo Nation was stratified into five regions using the existing sub-agency boundaries. A random sample of eight Council members per sub-agency responded to thirty-two issue statements. The responses were analyzed using frequency and percentages, ranking, one-way analysis of variance and Tukey's post-hoc analysis. Based on the responses, the issues can be grouped and ranked in the following descending order of agreement: (1) issues dealing with agricultural trainings; (2) issues dealing with economic self sufficiency; and (3) issues dealing with customary range use, social programs and innovative efforts of individual stockmen.

Brown, W. B. (1983). Use of herbicides to control weeds in Plantago. Master of Science Thesis, The University of Arizona, Tucson.

In the commercialization of Plantago as a large acreage Arizona crop, effective weed control measures involving the use of specific herbicides need to be developed.

Two Arizona grown varieties of Plantago were used in a field plot research where Paraquat, Karmex and Igram were sprayed post-emergence at various dates and concentrations.

A randomized complete block design was used in three types of herbicide tests. Dependent measures were taken on wet and dry weight of weeds and Plantago seed yield. Observational data was recorded on the Plantago height and types and numbers of weeds present during the experiment.

Findings indicated certain dates of spraying were more or less effective in weed control. Paraquat should not be sprayed on Plantago in concentration greater than two pints/acre. Karmex should be used at concentrations of at least 3/4 pound/acre. Treatments of two spraying dates were also more effective in the control of weeds than a single spray date.

Brubaker, Carla Ann. (1983). The analysis of landscape maintenance business opportunities. Masters Research Paper, The University of Arizona, Tucson.

This study utilized the methods employed in marketing analysis to identify the ornamental horticulture business opportunities among the commercial business and private residential communities in the Northwest Phoenix Valley area in Arizona.

The results quantified the landscape maintenance business opportunities in both the commercial and residential sectors and the specific landscape maintenance activities desired by both sectors.

The results suggest that the use of marketing surveys can be effectively utilized in determining business opportunities. Further, they can be used to determine the kinds of activities vocational agriculture students should be prepared to offer customers if they desire to enter this type of occupation.

Conte, B. (1984). An identification of tasks in agricultural mechanics in production agriculture in Arizona. Masters Research Paper, The University of Arizona, Tucson.

The purpose of this study was to identify the tasks associated with and the percent of time spent in the service, maintenance and repair of agricultural machines, equipment and farmstead buildings.

A non-random sample of three farms included a dairy; a cotton farm which also performed custom harvesting; and a cotton, alfalfa and wheat farm that also operated a beef feedlot. An interview schedule, along with a personal interview, was utilized to determine the percent of time and tasks performed on-farm, hired out or not performed within the areas of Tractor and Engine Power; Agricultural Field Machinery; Agricultural Buildings and Agricultural Electrification. Nearly 90 percent of the time was spent in the areas of Tractor and Engine Power and Agricultural Field Machinery.

The percentage of tasks performed on-farm was 81.5 percent in the area of Tractor and Engine Power, 59.0 percent in Agricultural Buildings and 43.9 percent in Agricultural Electrification.

de la Concha, Horacio. (1984). Educational concepts useful in a weed science course in Mexico. Master's Research Paper, The University of Arizona, Tucson.

The purpose of this study was to determine if some concepts can be included in a weed course in Mexico. A descriptive survey

was done or weed specialist members of the Mexican Weed Science Society. The survey was concerned with four areas of weed control, chemical and non-chemical control, implementation of control programs, and some miscellaneous questions. From the fifteen concepts presented in the questionnaire, two were considered as irrelevant for a weed course, four as important and the rest as essential. The results indicate that chemical methods have been overemphasized and that more time should be dedicated to non-chemical methods. A proportion of 40:60 of class time was suggested to cover each topic, respectively. A majority of the respondents thought it was necessary to develop instructional aids to improve teaching. The results of this study could be used to develop an outline for a textbook in weed control.

Goodluck, T. (1984). Basic competencies needed by Navajo ranchers on the Navajo Reservation. Masters Research Paper, The University of Arizona, Tucson.

The purpose of the study was to identify the basic agricultural competencies needed by beef cattle ranchers on the Navajo Reservation. The descriptive-survey type research involved the use of a jury of experts to identify problems and possible alternatives to the problems of the Navajo rancher. Through personal interviews, conducted with a random sample of Navajo ranchers (24), these problems and alternatives were quantified. Major findings of the study indicated that 73% of the Navajo ranchers perceived range management as a major problem, while 69% perceived the use of fences as an alternative to the problem. Findings also indicated that 69% of the Navajo rancher respondents recognized adult agricultural education as an alternative to agriculture problems on the Navajo Reservation. Based on Navajo rancher responses to problems and alternatives subsequent competencies were identified which could be included in Navajo area vocational agriculture programs.

Zurbrick, P. R. (1984). Bridging the gap in Arizona: A Status Report of Supervised Occupational Experience Programs. Research Report 285, Agricultural Experiment Station, The University of Arizona, Tucson.

The status of Supervised Occupational Experience (SOE) programs in the state of Arizona was explored indepth through a stratified random sample of eighteen high schools offering vocational agriculture in 1981-82. This report which summarizes the results reported by both students and teachers in the sampled

school provides pertinent data on enrollment, SOE participation and mean index values designed to measure scope of the SOE programs. The strata utilized included rural schools, urban schools and schools located on or serving students living on an Indian reservation.

The results indicate that in 1981-82, SOE programs were an important part of the vocational agriculture program as practiced in the state of Arizona. However, the total SOE program concept was not used uniformly by all vocational agriculture teachers in Arizona. Ownership-type SOE programs are still widely used in Arizona. Standards currently in use for "ownership" type experience programs are not on a par with those used for "placement" experience and need to be revised. Written standards and policies regarding SOE programs are not widely used in Arizona but were useful in those schools where employed.

CALIFORNIA

Leising, J. G. & Emo, K. (1984). Gender equity: California Future Farmers of America. University of California, Davis

This study was to ascertain the progress being made in gender and ethnic equity by the California Association of Future Farmers of America from 1981 to 1983. Data were collected from all FFA Chapters in California. Results indicated that more males than females were FFA members, but the percentage of females holding chapter offices (45.2%) was greater than the percentage of females in the state association (39.2%).

In 1983, the ethnicity of California FFA members was predominantly white. However, since 1981, the overall percentage of white members has decreased from 90.8 percent to 89.6 percent. The largest ethnic group was found to be Hispanic.

Leising, J. G. & Reed, J. (1984). Agricultural education commitment to quality standards (video tape). University of California, Davis.

This study summarizes the reform of vocational agriculture education in California. As a result of this study, two video tapes were developed. These video tapes trace the development of the reform movement of agricultural education in California from its beginning to the present and overviews the fifteen quality standards that are being implemented throughout California.

Perry, K., Leising, J. & State Agricultural Education Staff (1984). Blueprint for excellence: a process for implementing standards in California vocational agriculture programs.

The California State Agricultural Education staff has developed a resource guide to assist vocational agriculture departments in implementing the fifteen "quality standards" recommended by the State Agricultural Education Advisory Committee. Each quality standard is described, minimum compliance criteria, and strategy for implementation.

Perry, K. A. (1984). The development of the ornamental horticulture test for the model school evaluation project. Master's study. University of California, Davis.

The purposes of this study were to develop an ornamental horticulture test for use in the model school evaluation project and to ascertain differences in test scores between the model and companion schools. In addition, variables were identified that was thought to have an impact on test score differences.

Using a panel of experts the horticulture test was developed. It resulted in 116 questions in four areas. Using standard test development procedures, the test was field-tested at four schools and the test was reduced to 50 questions via item analysis and review by a panel of teachers. The test was then administered to horticulture program completers of model and companion schools.

The mean scores for each group were calculated, and a two-tailed t-test was performed. No significant difference between the two groups was found.

CONNECTICUT

Mannebach, A. J., McKenna, P. C., and Pfau, Geeta (1984). An analysis of research methodology reported in agricultural education, 1974-1982. Staff study. The University of Connecticut, Storrs.

The purpose of the study was to analyze the research methodology reported in agricultural education studies found in the annual national Summaries of Research and Development Activities in Agricultural Education, 1974-1982. The primary method used in this longitudinal study was document analysis. The research summaries reported were classified by two graduate research assistants as historical, descriptive or experimental. A five percent random sample of all studies was recoded by the principal author. The percentage of agreement between the coders and the principal author was 94 percent. Descriptive statistics and cross-tabulations were used to determine the extent and relationship between types of studies reported and research methodologies used.

Of the 1,150 studies reported, 48.5 percent were masters, 29.7 percent were doctoral and 21.7 percent were staff studies. A total of 50 of the 96 institutions included in the study reported research completed. Three institutions reported over one-third of the research conducted while eleven institutions reported over two-thirds of the research conducted.

Descriptive studies comprised the majority of the research conducted in agricultural education as reported in the Summaries. Ninety percent of the studies were classified as descriptive, 9.3 percent were experimental, and .7 percent were historical. Of the descriptive research reported, 45 percent were classified as survey studies, 13 percent were interrelationship studies, and 4.4 percent were developmental studies. The questionnaire was used to collect data in 626, or 54.4 percent of the studies reported while interviews were used in 14.3 percent of the studies, appraisal instruments in 18.6 percent of the studies, and observation was used 3.7 percent of the time. About one third of the abstracts submitted for inclusion in the Summaries reported the statistical test or technique used. In two-thirds of the abstracts reported, it was impossible to determine the statistical test or technique used. A higher percentage of doctoral studies reported the use of statistical tests or techniques than did masters or staff studies.

FLORIDA

Arrington, L. R. (1984). Relationship of 1983 program completer attitudes about vocational agriculture and their occupational status one year after graduation. Experiment station study. University of Florida, Gainesville.

The primary purpose of the study was to determine student attitudes about experiences in vocational agriculture one year after completing the program and determine if their attitudes are related to their current occupational status. The study also compared the actual occupational status of program completers with their pre-graduation occupational plans. There were a total of 209 program completers who responded to the instrument. Among the findings was that over one-half (51.5 percent) of the respondents were involved with an occupation related to agriculture one year after graduation. Approximately one-third of the respondents were employed in a non-agricultural occupation. Findings indicated that students had not accurately predicted their post-graduation occupation. Program completer attitudes were not related to occupational status.

Cheek, J. G. & McGhee, M. B. (1984). Assessment of competencies possessed by students enrolled in applied principles of agribusiness and natural resources occupations programs. Department of Agricultural and Extension Education. University of Florida, Gainesville.

The central purpose of this study was to assess the level of mastery of Florida students enrolled in the Applied Principles program during the 1982-83 school year. In order to achieve this purpose, three objectives were developed as guidelines for conducting the research.

A sixty item objective test, Applied Principles Achievement Test (APAT), was developed and based upon objectives in the state curriculum guide and was administered to 1039 students enrolled in Applied Principles programs. A teacher questionnaire was also developed to determine whether or not the 44 teachers surveyed were teaching the competencies specified in the state curriculum guide.

Students' level of mastery on the sixty item APAT was slightly over 52 percent with students performing best on questions related to the core components consisting of instruction in leadership, agricultural business management, and agricultural mechanics. Students in grades ten, eleven, and twelve scored higher than students in grade nine. Scores were also significantly higher among students who were current members of FFA, involved in supervised occupational

experiences, college or post-secondary education bound, and students with plans to enter an agricultural occupation. There was no significant difference in scores between students who were previously enrolled in an agricultural class and those who were not.

Further findings showed that 46.5 percent of the competencies were taught by 75-100 percent of the teachers and 36.4 percent of the competencies were taught by 50-74.9 percent of the teachers.

Maday, J. A. (1984). Develop and field test written and performance student achievement measures for agricultural machinery and equipment operator and maintenance person. Division of Vocational Education, Florida Department of Education. University of Florida, Gainesville.

The purpose of this study was to develop and field test written and performance achievement measures for the occupational area of Agricultural Machinery and Equipment Operation and Maintenance. The content of these tests was based on a list of 167 Occupational Proficiency Performance Standards provided by the Florida Department of Education. The project staff contracted with a group of vocational agriculture teachers who served as consultants on the project. These teachers wrote multiple choice test items and helped to develop performance tasks. The resultant written and performance tests were field tested over a two month period in Florida high schools. Field test results were subjected to statistical analysis to determine validity and reliability of the items. The results of the project consist of two written tests of 207 questions each and two performance tests of four jobs each. Also included are an examiner's guide, student instruction booklet, evaluation sheets for the performance tests, and a list of materials needed.

McCall, T. M. (1984). Identification, acquisition, adaptation, and distribution of printed and audio-visual curriculum materials for teachers of vocational agriculture. University of Florida, Gainesville.

The purpose of this project was to review, identify, and recommend to appropriate Department of Education personnel materials useful and appropriate in a competency-based instructional program in Livestock Production and/or useful and appropriate materials to be used in developing a competency-based instructional program in Livestock Production. Materials recommended and accepted were adapted for Florida and changed to a competency-based instructional format.

An advisory committee consisting of four (4) members was formed

in cooperation with the Department of Education personnel. The committee reviewed and recommended appropriate materials to Department of Education personnel. The Project Director revised the recommended materials to remove out-of-state biases and to include instruction pertinent to Florida. The materials were also adapted to a competency-based format.

A Teacher's Guide and a Student's Guide containing performance objectives, teaching outlines, transparency masters, worksheets, assignment sheets, written tests and answer keys, and performance checklists were developed. The Teacher's Guides will be made available to all vocational agriculture teachers who teach Livestock Production and the Student's Guides to all students enrolled in Livestock Production.

McGhee, M. B. & Cheek, J. G. (1984). Assessment of competencies possessed by students in the fundamentals of agribusiness and natural resources occupations programs. Department of Agricultural and Extension Education. University of Florida, Gainesville.

The central purpose of this study was to assess the level of mastery of the students enrolled in the Fundamentals of Agribusiness and Natural Resources Occupations programs in Florida schools during the 1982-83 school year. In order to achieve this purpose, four objectives were developed as guidelines for conducting the research.

A sixty item objective test, Fundamentals of Agribusiness Occupational Achievement Test (FAOAT), was developed based upon students enrolled in Fundamentals of Agribusiness and Natural Resources Occupations programs. A teacher questionnaire was developed to determine the percentage of time the 54 teachers surveyed spent on topics related to the six major content areas. The questionnaire also asked teachers to indicate whether or not each of the 76 competencies identified in the curriculum guide for the Fundamentals of Agriculture Occupations programs was included in their Fundamentals program. Data were analyzed using descriptive statistics and one-way analysis of variance.

Students' level of mastery on the FAOAT was slightly over 57 percent . Students performed best on the questions related to agribusiness management and plant science, and poorest on agricultural mechanics questions.

Students in the higher grade level (twelfth) scored significantly higher on the FAOAT than the lower grades (ninth, tenth, and eleventh). There was no significant difference in scores between those students that had never been in an agricultural program before from those students that had been previously enrolled. Scores were

also significantly higher among students who were current members of FFA, involved in supervised occupational experiences, college and post-high school education bound, or had plans to enter agricultural occupations.

Further findings showed that at least seventy percent of the 76 listed Fundamental competencies were taught by 50 percent or more of the teacher respondents, but only two of the sixteen competencies in agricultural mechanics were being taught by seventy-five percent or more of the teachers.

Animal science and plant science topics consumed the largest percentage of the school year with agricultural mechanics instruction receiving a smaller percentage of time than was recommended by state curriculum guide.

Recommendations were made based upon the data collected, analyzed, and reported.

Summerhill, W. R. & Taylor, C. L. (1984). Evaluation of extension in-service education: ritual or precursor of program excellence? Program Evaluation and Organizational Development, Cooperative Extension Service. University of Florida, Gainesville.

The Florida Cooperative Extension Service conducts numerous in-service education programs each year for Extension field staff. Continuing evaluation of program offerings is strongly encouraged and supported. However, there is little evidence of the nature, scope, and use of the evaluations actually carried out. This study sought to determine the extent to which state Extension specialists were evaluating in-service education for which they had responsibility, the kinds of evaluative information considered to be important, and the uses being made of the information collected.

The data were collected through open ended telephone interviews with 20 state Extension specialists felt to be representative of those offering in-service education programs during 1983-84.

All specialists interviewed indicated that they routinely evaluated their in-service education offerings. Eighty-five percent conducted a formal evaluation, while the remainder evaluated informally through listening for participant comments. The formal evaluations were largely "end of meeting" assessments of participant perceptions of the quality of the training. Feedback was obtained on such areas as appropriateness of the content, usefulness of information, and effectiveness of the teaching-learning situation. Little knowledge, skill, or attitudes, and no follow-up was made to determine transfer of the training to the job situation, or the impact of such transfer.

Evaluation information collected was primarily used for program improvement, with little use made for accountability. Specialists perceived little demand by the Extension organization for in-service education evaluation information for individual or organizational purposes.

Results of the study indicated that current in-service education evaluation efforts are more than just ritual, but have significant room for expansion as precursors of program excellence.

Waltz, F. C., Arrington, L. R., Cheek, J. G., & Beeman, C. E. (1984). A guide to retaining postsecondary students in vocational training programs. Florida Department of Education. University of Florida, Gainesville.

The objective of this guide is to aid administrators and other school personnel in assisting postsecondary students in overcoming some of the barriers that prevent them from completing vocational education programs. The contents were developed from a study titled "Identification of Recruitment Barriers to Vocational Training Programs as Perceived by Students, Teachers, Counselors, and Administrators in Selected Florida Schools" (Scanlon, Arrington, Cheek, and Beeman, 1982; Waltz, Arrington, Cheek, and Beeman, 1983, 1984). The central purpose of the overall study was to describe barriers to recruitment and retention of disadvantaged, unemployed, underemployed, and out-of-school youth and to develop a plan for implementing recruitment strategies to attract and retain students in postsecondary vocational programs.

The guide contains a model which presents a systematic scheme designed to assist in retaining students in vocational education programs. The model is designed so that each of the thirteen retention barriers (Waltz et al, 1983) can be inserted into the appropriate blocks, thus developing a logical sequence for overcoming the identified barrier. The thirteen barriers were synthesized from a list of forty-nine barriers identified by students, teachers, counselors, and administrators (Scanlon et al, 1982). The criteria used to select barriers to be included in the guide were: (1) each barrier must have been ranked in the top ten as to their importance by at least one of the four groups listed above, (2) each barrier must have had the potential for being solved by school personnel. After combining several closely related barriers, thirteen met the criteria required to be included in this manual. A brief explanation of each of the thirteen barriers is presented followed by the recommended strategies for resolving each. The strategies suggested were compiled after analyzing the results of a nationwide survey of vocational school administrators. Each recommended strategy has been successfully used.

Waltz, F. C., Arrington, L. R., Cheek, J. G., & Beeman, C. E. (1984). A recruitment package for postsecondary vocational education. Florida Department of Education. University of Florida, Gainesville.

Institutions, departments, and programs depend upon enrollment, student satisfaction, and a positive public image for survival. The purpose of this recruitment package is to provide recruiters in postsecondary institutions with the knowledge, guidelines, and examples (models) for mounting an effective and efficient recruitment campaign to benefit their educational institutions.

The content of this recruitment package include materials that were developed for use in New Mexico by the New Mexico Career Information System and adapted for use in Florida and data which resulted from the research project titled, "Identification of Recruitment Barriers to Vocational Training Programs as Perceived by Students, Teachers, Counselors, and Administrators in Selected Florida Schools."

This package is designed so that it can be used in two ways. It is a guide to establishing and implementing a new promotional policy and effort. It also can be used for specific promotional needs, such as how and when to use direct mail, radio and other media; how to target and recruit a specific audience.

The readers of this package, upon completing the activities described within, will be able to:

1. write a promotional campaign for an institution, program area (vocational-technical education), program (e.g., water utilities management), or course.
2. write or select effective brochures, flyers, or posters.
3. write or select effective press releases, whether announcements or stories.
4. write or select effective radio releases.
5. write or select effective television releases.
6. choose various other promotional media.
7. design and implement recruitment activities.
8. design and implement appropriate support services (e.g., counseling) to recruitment.
9. evaluate all or any of the above tasks, one through eight.

The primary audience for this package is people who are responsible for the recruitment of students, young adults and adults, to career training programs (vocational-technical-occupational) in two-year postsecondary institutions. It is believed that other post-secondary recruiters and other educational programmers will find the contents useful. This secondary audience might include: recruiters for colleges and universities, program developers for continuing education programs and professional associations, workshop planners, and ABE program directors and teachers.

Waltz, F. C., Arrington, L. R., Cheek, J. G., & Beeman, C. E. (1984). Identification of recruitment barriers to vocational training programs as perceived by students, teachers, counselors, and administrators in selected Florida schools, phase III. Florida Department of Education. University of Florida, Gainesville.

Vocational educators have been concerned in recent years over the number of students leaving school before obtaining adequate skills and training to acquire and maintain employment. Educators have reported that even among the more successful vocational education programs, a number of barriers cause students to not enter vocational programs or to leave programs prior to program completion. Findings of the previous phases of this study indicated a need to identify the factors that influenced students who were currently enrolled in a vocational training program to enroll and to continue their enrollment and to ascertain the degree of influence each factor had upon the student's decisions.

A census of the 31 designated area vocational education schools in Florida was taken to ascertain the number of postsecondary students enrolled who had completed at least one semester of a vocational training program. The population was limited to students who had completed at least one semester because the researchers were interested in identifying those factors that were contributing to the students continued enrollment. A sample of 389 students was selected.

The purpose of the instrument was to ascertain whether each strategy has influenced initial enrollment or continued enrollment. To accomplish this, the 85 strategies which had been identified in Phase II (Waltz et al, 1983) were condensed to 20 statements. Two open-ended questions were also included to allow the students to indicate other major reasons for enrolling or continuing enrollment. The instrument with the cover letter was mailed to cooperating area vocational schools in Florida. The number of surveys sent to each director was proportional to the percentage of the total population the school represented. The directors randomly distributed the surveys among their instructors, who in turn randomly distributed the surveys among several of their students. The instructors were asked to have the students respond to the instruments immediately and to collect the instruments as soon as the students had completed them. An 82 percent return rate was achieved.

The survey revealed that the strongest influence upon a student's decision to enter vocational training was the need for the training offered by the school to get the job they want. Also, the student's desire to qualify for a specific type of job or their personal goal to provide a better standard of living for themselves or their families were stronger influences of their initial enrollment than the reputation of the school, reputation of the program, instructor's performance in the classroom, placement record of the program, schedule flexibility, financial aid available, or any other major factor considered. Finally, the students continue their enrollment and strive to complete the program for the same reasons they entered.

ILLINOIS

Kang, J.T. (1984). Interorganizational relations between extension agencies and agricultural development agencies in Asian and Oceanian countries. Doctoral dissertation. University of Illinois, Champaign-Urbana.

This study had two main purposes. First, the study was intended to determine the factors related to the three facets of interorganizational relations (coordination, structural conflict and operating conflict) in extension agencies and other agricultural development agencies. Second, the study was intended to determine whether there are differences between general and commodity-specific extension agencies, in terms of the selected aspects of interorganizational relations.

The data were collected through a questionnaire mailed to the extension directors in the Asian and Oceanian countries. Data for the study came from 22 general extension agencies in 15 countries and 12 commodity-specific extension agencies from 10 countries.

The major findings of the study were as follows:

Resource, poer and exchange variables were found to be more important determinants of all three dependent variables (coordination, structural conflict and operating conflict) than were the organizational variables of age, size and complexity. The resource variable was the best predictor of all three dependent variables.

Commodity-specific extension agencies had more frequent contact and more complex interorganizational contacts than did the general extension agencies. In addition, respondents in commodity-specific extension agencies reported less structural and operating conflict with the other agricultural development agencies than did the respondents in general extension agencies.

Considering the results of the study, two recommendations were made. Careful and long-range planning is necessary to encourage both more frequent contacts and more complex contact modes, such as resource exchange, overlapping board membership and joint programs. Real sophistication in planning for better interorganizational relations lies in strenghthening the individual components, especially in terms of the resources and power. In other words, there is a need to create a balanced institutional and physical infrastructure among the agricultural development agencies.

It is recommended that leaders in general extension agencies try to adopt some general principles of coordination which are characteristic of commodity-specific extension agencies.

Russell, E.B. and Courson, R.L. (1984). Illinois Core Curriculum in Agriculture - Phase V. Staff study, Illinois State Board of Education. University of Illinois, Champaign-Urbana.

This phase of a five-year project involved the development and production of core curriculum materials for senior or fourth-year students enrolled in vocational agriculture programs in rural and urban secondary schools. Twenty-four instructional packets for rural vocational agriculture programs and nineteen packets for metropolitan programs were developed and printed. In addition, during this phase, 29 teacher workshops were conducted to disseminate Core III materials developed in 1982-83. A booklet titled, "Using the Illinois Core Curriculum for Developing Courses of Study in Vocational Agriculture", was developed and disseminated.

Identification of units and problem areas to include in the core curriculum was a joint effort of the project staff and two advisory committees based on employment data and occupational trends analyzed during Phase I of the project. A free set of the core materials consisting of approximately 1000 pages was available to all Illinois vocational agriculture teachers attending a dissemination workshop.

Russell, E.B. and Courson, R.L. (1984). Illinois Core Curriculum in Agriculture - Phase VI. Staff study, Illinois State Board of Education. University of Illinois, Champaign-Urbana.

This final phase of a five-year project involved the dissemination of Core IV materials developed during the previous phase. Twenty-six inservice workshop sessions were conducted in various statewide locations to accomplish this purpose. A total of 326 sets of rural Core IV materials and 117 sets of metropolitan Core IV materials were disseminated to Illinois high schools, involving approximately 90% of the State's vocational agriculture teachers.

Sigman, V.A. (1984). Women's participation in agricultural and home economics education in the Third World. Doctoral dissertation. University of Illinois, Champaign-Urbana.

The study documents women's 1978 to 1980 participation in Third World formal agricultural and home economics education and examines factors affecting their participation.

The research population consists of formal intermediate and higher agricultural and home economics education institutions in the Third World. The self-selected research sample consists of institutions whose administrators responded to the survey questionnaire. A total of 1,459 institutions were surveyed; 689 questionnaires were returned useable.

Women account for 11% of intermediate and 19% of higher students in institutions offering only agricultural curricula (i.e., agricultural-only institutions). They account for 99% of intermediate and 98% of higher students in institutions offering only home economics curricula (i.e., home economics - only institutions).

Comparison of UNESCO Statistical Yearbook 1982 data on women's representation in similar-level general education with these findings on their agricultural-only representation shows that women are less-well represented in agricultural than in general education. Their intermediate agricultural-only representation (11%) is less than their general secondary-level representation of 38%; their higher agricultural-only representation (19%) is less than their general tertiary-level representation of 34%.

At the intermediate level, 49% of women are in home economics-only institutions, 30% are in agricultural-only institutions, and 20% are in combined institutions which offer both agricultural and home economics curricula. Women's higher-level distribution is 8%, 58%, and 33% respectively.

Women's share of higher agricultural-only enrollment is 7% more in 1980 than in 1970. Projected growth rates indicate that (a) assuming simple growth, the gap between women's and men's participation widens, but (b) assuming compound growth, the gap decreases and equal enrollment is theoretically possible by 2008.

Regression equations show: the independent variables together explain 59% of the variance in women's higher agricultural-only participation; the intermediate-level equation was not significant. Increases in girls' secondary schooling appear to be most related to increases in women's participation in agricultural-only education at both levels.

Kelly, Randall Jay (1984). Performance Results of a Gasoline Type Tractor Engine Converted to Use 170-proof Ethanol. Masters study. Southern Illinois University, Carbondale.

One of the major problems concerning ethanol as an alternative liquid fuel is that there has been substantial promotional efforts suggesting its potential as an alternative fuel with few researched-based facts to support the ideas.

The goals of this study were: 1) to convert a spark - ignition tractor to operate on 170-proof ethanol without major engine modification and 2) to test its performance in relation to varying amounts of fuel supplied, fuel temperature ranges, and ignition timing settings.

A John Deere 3020 spark ignition tractor was converted to operate and perform on 170-proof ethanol to similar power and efficiency level as compared to gasoline operation. The study indicated problems not associated with engine operation: first, initial starting after engine was often difficult and secondly, contamination of the lubrication oil was a definite problem.

The study also indicated that fuel flow and ignition timing influence the power and efficiency level of the converted tractor engine. The main jet size enlargement of 35 percent produced what appeared to be a higher power and efficiency level than the other fuel flows tested. The fuel temperatures tested did not effect the engine.

Generally, the feasibility of using 170-proof ethanol in a gasoline designed tractor which has undergone minor modifications seemed quite remote if the contamination of the lubricate oil is not corrected.

Coolidge, Charles (1983). Effectiveness of Extension Methods, For the Subsistina Farmer, As Perceived by Malaysian and U.S. Extension Agents. Master Studies. Southern Illinois University, Carbondale.

The primary objective of this study was to identify effective methods of extension, as perceived by experienced extensionists, for teaching the subsistence farmer form lessor Industrialized Counties who has a low level of education. A list of these methods was then compiled so that extensionists newly recruited to the field would be able to draw upon it to guide them in their extension efforts.

A questionnaire was selected as the instrument to gather the necessary information. Two groups were chosen for this study. One group consisted of extensionists from the U.S., the other group was extension agents in Malaysia. The respondents were asked to rate extension methods. An extension method was listed, followed by a scale one to eleven. The agents were to mark one of these numbers in accordance to the way they felt about the effectiveness of the method. One had the lowest value on the scale.

The researcher made the following conclusions: 1) Extensionists from the U.S. and Malaysia do not view, overall, the methods of information dissemination differently. Of the 22

methods, only two were rated significantly different. These two methods were: Newsletters and television. 2) Both the U.S. and Malaysia extensionists rate the following methods in the top five: Group Demonstrations and Farm Visits. 3) Both the U.S. and Malaysia extensionists take the following methods in the bottom five: Newspapers, telephone, and award dinners.

Hahn, David G. (1984). The Analysis of Microcomputer Usage and Needs In Secondary Vocational Agriculture Programs in Illinois. Masters Studies. Southern Illinois University, Carbondale.

The purpose of this study was to determine how microcomputers are being used in Illinois Vocational Agriculture Programs. The objective of the study was to determine the following: (a) the extent microcomptuers are being used in Illinois Vocational Agriculture Programs, (b) the types of curriculum materials that should be developed to aid vocational agriculture teachers in teaching microcomputer usage in agriculture and (c) the microcomputer competencies perceived to be necessary by Illinois vocational agriculture teachers.

The study population consisted of 407 Illinois Vocational Agriculture teachers who taught vocational agriculture during the 1983-1984 school year. A questionnaire was selected as the most appropriate instrument to gather the information for the study. The questionnaire consisted of six sections. The first section dealt with demographic and personal information. The second section was designed to determine microcomputer availability in VO-AG programs. The items of the third section was designed to determine the extent and the ways microcomputers were used as teaching aids. Section four was designed to establish the microcomputer instructional needs for vocational agriculture teachers and their students. The fifth section was designed to rank microcomputer competencies based on how strongly the teachers felt the competencies were needed. The last section was designed to determine if available instructional materials were adequate for teaching VO-AG.

The researcher made the following conclusions: 1) 91% of IL. VO-AG teachers have access to microcomputer for use in their programs and only 58% are currently using microcomputers in their programs. 2) 66% VO-AG teachers only use microcomputers to a limited degree. 3) 85.4% of IL VO-AG teachers plan to incorporate microcomputers into the program. 4) There are 103 essential microcomputer competencies that Illinois VO-AG teachers believe they need.

Gwaltney, Larry J. (1984). The Development of a Computer Literacy Program at Webber Township High School. Masters study. Southern Illinois University, Carbondale.

The purpose of this study was to analyze the computer courses and programs offered at the elementary and secondary schools in the area surrounding Bluford, Illinois, and from such data organize and develop a method or procedure for teaching microcomputer literacy to all students at Webber Township High School which is located in Bluford, Illinois.

A questionnaire containing a series of interview questions was used by the researcher in conducting on sight interviews with six teachers at the six local high schools. The interview questionnaire consisted of two pages. The first page was designed to obtain background information about the computer teacher, the computer courses offered, and the use of computers in the school. The researcher used open and closed form dependent and independent questions. The second page of the questionnaire contained questions that could be altered by the researcher during the interview to obtain the schools computer goals and objectives.

The following conclusions were made based on the researcher's findings: 1) The six local high schools used in the study have purchased microcomputer hardware and software, and are in the initial process of utilizing it for computer assisted instruction. 2) Although administrators and teachers believe students should become computer literate, they are undecided as to what computer literacy really means, and how to incorporate teaching it in the schools curriculum.

Chilimba, Nancy Anna. (1983). Ways that Would Make Political Leaders Acknowledge the Role of Agricultural Education in Increasing Food Production in Tanzania. Masters study. Southern Illinois University, Carbondale.

The purpose of this study was to determine ways of making political leaders acknowledge the role of agricultural education in increasing food production in Tanzania.

The study population consisted of African students currently studying at Southern Illinois University - Carbondale, University of Tennessee at Nashville, and Purdue State University at Indiana.

A questionnaire was selected as the most appropriate instrument to gather the information required. The instrument was divided into three parts. Part one referred to the background information of the population. Such characteristics such as age, sex, part of Africa they came from, allowed the researcher to see if these characteristics influenced the responses. Part

two referred to the present food situation of their countries. It was developed to indicated how the population felt about food production strategies. The third part was designed to indicate how the population felt about existing food production factors such as literacy percentage, farming attitudes, and causes for food shortages.

Based on the findings, the following conclusions were made: 1) Most of the food crops produced in West African countries is consumed in the country which 50% of food crops produced in Central/East African countries is exported out of the country. 2) Political leaders offered little advice to farmers. 3) Concerning male and female differences in food production problems, the following were formed: female respondents felt that poor farming practices and farming attitudes were the major causes of food shortages; bad weather and political influence causes were felt by both male and female. 4) Major causes for food shortages could be categorized into five groups: ecological reasons, technological reasons, economical reasons, political reasons, farming attitudes.

Harun, Abu Yazid Haji (1983). Factors Influencing Freshmen of University of Agriculture Malaysia to Major in Agriculture. Southern Illinois University, Carbondale.

All first semester students majoring in agriculture in academic year 1983-1984 were selected to participate in the study. A questionnaire was selected to gather the data. The instrument was divided into four sections. In the first section, questions related to students profile were asked. Factors influencing students' decision were solicited in the second section. In the third section, students were asked about the reasons for choosing VPM, and in the final section students comments and suggestions were invited.

The following conclusions were drawn: 1) Agriculture experience and nature of residential background did not determine the choice of students to major in agriculture. 2) There was no relationship between the influence of selected factors on students who chose VPM first and on those who did not choose VPM first. 3) Students' reasons to major in agriculture were not agriculture related. Their two important reasons selected were to get a degree and to prepare for a career.

Kochang, Alex A. (1984). An investigation of the effectiveness of the Microcomputer as a tool for self-teaching in the vocational classroom. Southern Illinois University, Carbondale.

The purpose of this study was to investigate the effectiveness of the microcomputer self teaching in comparison with classroom lecture on the cognitive learning of new material presented. Was there more cognitive learning gained by the use of the microcomputer as a tool for self teaching as compared to lecture.

The researcher used a measuring instrument consisting of two identical forms of a test. The first paper consisted of six questions and the second part asked each individual to write two short programs based on information they had received. The amount of time for completion of the test was ten minutes. Four background questions were used to gather data concerned with the independent variables of age, sex, knowledge of computer and grade level. This test was given to students that were randomly selected from two high schools in Illinois.

Based on the findings, the researcher concludes that there is no significant difference between students instructed by the microcomputer self-teaching method in terms of cognitive test scores than students instructed by classroom lecture.

Christian, Sheba Kargbo. (1983). An Analysis of Vocational Agriculture Programs in the United States of America with Implications for Sierra Leone. Southern Illinois University, Carbondale.

This study was a descriptive survey of vocational agriculture programs in the United States which focused on evaluating these programs to determine appropriate program guidelines for consideration in Sierra Leone. The purpose of this study was to analyze quality vocational agriculture programs in the U.S. with application to vocational agriculture programs in Sierra Leone.

Two populations were sampled to provide the study's information. The populations were (1) established successful teachers of vocational agriculture and (2) beginning successful teachers of vocational agriculture. Teachers who were presidents of State Associations during 1981-1982 school year were selected as the sample of established successful teachers. These individuals provided the names of a beginning successful teacher.

A questionnaire was used to gather the necessary data. Twenty goal statements were developed and given to the study population. These goals were ranked by order of importance.

Based on the findings of the following conclusions were: 1) Many of the program components and student goals of the U.S. and Sierra Leone were similar. 2) The primary components of the Agriculture program were: FFA, SOEP, classroom instruction, and adult education programs. The secondary components were: Professionalism and Advisory Committees. 3) The main goals that vocational Agriculture programs were as follows: a) Teaching knowledge and skills needed for entry into employment; b) Developing student leadership skills; c) Providing exploratory occupational experience; d) Teaching good work habits, e) Teaching the importance of scholarship.

INDIANA

Forney, D.L. (1984). Assessment of anticipated enrollment for agricultural education utilizing present scholastic aptitude test (SAT) scores. Staff study. Purdue University, West Lafayette.

Concern is being raised about anticipated enrollments in agricultural education programs, licensing standards, certification decisions, and competency standards for graduates. Likewise, suggestions are being made for testing basic skills for admissions to teacher education. This study was conducted to assess projected enrollments in agricultural education utilizing Scholastic Aptitude Test (SAT) scores as an admission criterion to teacher education. SAT scores of present students were compared to national, state, university, and School of Agriculture SAT mean scores to determine student status.

The population for this study was comprised of 68 undergraduates enrolled in agricultural education. Their 1983-84 academic record files were used to compile the necessary data. Individual students were listed with their respective SAT verbal and math scores. These scores were utilized to discriminate those students who would have been denied admittance to the teacher education program by completing a comparison to national, state, university, and School of Agriculture mean scores. Student status was determined in the program whereby students were either maintained or dropped because of low verbal, low math, or low verbal and math SAT scores in comparison to the categories listed previously.

The analysis showed that the university's SAT scores (both verbal and math) have consistently exceeded both the national and state SAT means. Therefore, greatest losses to the program would be shown if university means were adopted as admissions criteria to teacher education programs. It was also shown that the lesser percentage loss would be shown if state SAT mean scores were utilized. Activation of this criteria (SAT verbal = 410, SAT math = 453) would show an enrollment of approximately two-fifths of its present numbers in agricultural education.

If a criterion based on Scholastic Aptitude Tests must be implemented for admission to teacher education, it is recommended that present or near present state SAT means be utilized. However, judgment must be made as to whether the SAT score reflects the quality of a student's mind and is a valid predictor of college/program success and of teacher competencies.

Forney, D.L. (1984). Assessment of division effectiveness and attitudes of agricultural education students. Staff study. Purdue University, West Lafayette.

Concern had been raised about decreasing enrollments in the agricultural education division and the ability to maintain a quality program for teacher education. This study was an attempt to assess the effectiveness of division activities, the origin of student interests in agricultural education, and the status and future plans of the agricultural education student.

Questionnaires were mailed to all undergraduate students in the agricultural education program and a total response rate of 82.5% was achieved. The questionnaires were precoded and analyzed through the computer using the Statistical Package for the Social Sciences (SPSS) program.

The largest portion of agricultural education students were first introduced to agricultural education by vocational agriculture instructors, followed by program presentations to freshmen students, and other school personnel. The reasons given for entering agricultural education were that students enjoyed their vocational agriculture experience, they enjoyed working with people, and they felt that agricultural education provided a useful curriculum. The most frequently cited means of increasing enrollments were means of better informing high school personnel about the program, publicizing opportunities available to agricultural education graduates other than teaching, and continuing option presentations to college freshmen students in agriculture.

With this information it is assumed that recruitment efforts be concentrated at the high school level--providing printed material and visits by staff members or students to explain the current program and its curriculum structure. Recruitment efforts should also include continuing option presentations, updating and expanding published recruitment materials, re-educating high school personnel in regards to the program, efforts focused on enhancing the image of the vocational agriculture instructor, publicity of the need for able and qualified instructors as well as emphasis of the other opportunities available to agricultural education graduates other than teaching.

Peters, J.L. (1983). Student reactions to reflective teaching: a form of laboratory teaching experience. Staff study. Purdue University, West Lafayette.

The major purpose of the study was to determine the feasibility and use of Reflective Teaching (R.T.) in an introductory teacher education course. Specifically, the study made an attempt to answer the problem of just how relevant students think reflective teaching is in an introductory teacher education course.

The experimentally accessible population was students enrolled in ED 249, Directed Experience in Schools. The subjects (N=39) consisted of undergraduates in the School of Agriculture, School of Consumer and Family Services, and School of Humanities, Social Science and Education. Several students, acting as teachers, simultaneously taught the same R.T. lesson to several small groups of their peers. Each student had the opportunity to teach a lesson.

Two major instruments were used, Student's Reaction to Laboratory Teaching Experience and My Experience With Reflective Teaching. Both instruments were used as posttest only measures. From the information gathered on the instruments, it appears that indeed students do think that reflective teaching is an effective and relevant technique for use in an introductory teacher education course. One student who had been very positive about his reflective teaching experience summed up his participation with the statement: "This experience has made me more comfortable about my choice to be a teacher."

Peters, J.L. (1984). Teacher and student reactions to student assisted instruction: a teaching strategy for the vocational agriculture classroom. Staff study, Purdue University, West Lafayette.

Teaching strategies such as lecture, lecture discussion, demonstrations, etc., have been in use by vocational agriculture teachers for a number of years. The purpose of the study was to determine the feasibility and use of a new teaching strategy, Student Assisted Instruction (S.A.I.), for use in the vocational agriculture classroom. Specifically, the study made an attempt to determine the effectiveness of S.A.I. as a new teaching strategy.

Subjects (N=496) were students of vocational agriculture teachers who were enrolled in a graduate level course, Problems in Agricultural Education. To fulfill part of their course requirements, the teachers (N=12) developed five S.A.I. lessons for each of their classes. Several students, acting as teachers,

simultaneously taught the same short S.A.I. lesson to several small groups of their peers. Each student had the opportunity to teach a lesson.

A 31-item posttest only instrument, Student Assisted Evaluation Form, developed by the researcher, measured students' reactions to their involvement in S.A.I. The alpha reliability of this instrument is .88. Both students and teachers were also asked to respond to a question concerning their reactions to S.A.I. From the information gathered on the instrument and the students' and teachers' answers to the questions, it appears that indeed students and teachers feel that Student Assisted Instruction is an effective and relevant teaching strategy for use in vocational agriculture classrooms.

Brase, T.A. (1984). Homogeneity of selected relationships between Iowa vocational agriculture instructors and secondary school principals. Master of Science Thesis. Iowa State University, Ames.

Identifying interactions that influence a principals' attitude toward the vocational agriculture instructor was the purpose of this study. Using the sematic differential technique, data were collected from 81 vocational agriculture teachers and 81 secondary principals in schools with vocational agriculture programs in eight instructor-principal interaction areas. Principals expressed more familiarity with the duties and responsibilities of the vocational agriculture instructor than did the instructors of the principals' duties and responsibilities. Both groups responded very positively to the work interaction, personal habits, temperament and work habits interaction statements and negative to the drinking, talking and time interaction statements. Differences were observed between instructor responses to the success of the leadership program area, classroom instruction, and the overall program when grouped by response to the interaction statement concerning work habits.

Chizek, J.W. (1983). A follow-up study of Iowa State University agricultural education undergraduate majors from 1964-81. Master of Science Thesis. Iowa State University, Ames.

The purpose of the study was to follow-up Iowa State University Agricultural Education undergraduates who graduated from July 1, 1954, to December 31, 1981. The population for the study included 680 B.S. degree graduates from 1964 to 1981. A questionnaire to collect data was sent to all graduates. The final return was 538 respondents or 79.3% graduates. The respondents were divided into 3 groups; those graduates who decided not to teach, those who taught vo-ag and left the teaching profession and those who entered teaching and continued to teach vocational agriculture.

No significant differences existed among the three groups with respect to agricultural background, characteristics of present occupations as measured by months employed to earn salary and hours per week spent on the job, perceptions of academic advising and perceptions of the adequacy of training received in the agricultural education curriculum.

Significant differences were found to exist among the three groups with respect to high school vo-ag and FFA background, characteristics of present occupations as measured by average nights per week spent on job related duties, number of professional

organizations, number of full-time occupations and length of first employment, distance of present employment from parents' home, perceptions of the student teaching program and related experiences and perceptions of the effectiveness of the total undergraduate program as preparation for first and present employment.

Totally, 376 graduates (69.8%) had taught vo-ag at some time with an average tenure of 4.1 years for those who entered teaching and 5.8 years for those who stayed in teaching. In 1983, only 100 graduates (18.6%) were teaching vo-ag. The highest percent of graduates (25.6%) were presently employed in farming, more than in any other occupational area. The third highest employment area was sales representative with 10.2% presently employed followed by banking with 8.3% presently employed in this area.

Gamon, J.A. (1984). An experimental of resource materials on leadership/delegation for 4-H youth. Doctor of Philosophy Dissertation. Iowa State University, Ames.

Development of leadership skills is a 4-H priority. Therefore, resource materials to help teach delegation of leadership were experimentally evaluated with 106 youth at two Iowa 1983 4-H leadership camps.

High-school age campers were randomly assigned to small groups and treatment levels. Trained adults who were either volunteers or Cooperative Extension Service personnel provided over six hours of instruction in leadership using either the experimental materials on leadership delegation or previously developed materials.

There were no differences at the .05 significance level between treatment levels in participation of members in small group activities, in leadership styles, or group productivity. In the second camp, there were significant differences in favor or respondents in the experimental group for their tendency toward delegation, drive, cohesiveness, and overall group effectiveness.

Hersey and Natemayer's (1982) Problem-Solving Decision-Making Style Inventory was used to assess leadership styles. Although this study involved youth rather than adults, the normal curve distribution of leadership styles approximated the model. Group effectiveness measures of drive, cohesiveness, and productivity correlated positively (.420 to .535) with tendency toward delegation and (.240 to .295) with participation. Drive, cohesiveness, and participation were intercorrelated above .5. Sex of campers was not related to leadership style, except that females were slightly more likely to prefer the participative style. Grade in school and authoritative leadership style were positively correlated at less than .3.

Hall, D.J. (1984). Beef-cow management changes of rural family development (RFD) clients. Master of Science Thesis. Iowa State University, Ames.

To measure changes in the beef-cow production practices of RFD program participants was the purpose of this study. Forty RFD clients with beef cows were randomly selected to participate in the study. Individual interviews were conducted with selected participants. Participants were asked to react to 72 beef-cow production practices and indicate whether they had used the practice prior to RFD program enrollment and if they were currently engaged in each practice. RFD program participants had increased the number of practices used while they were participating in the program. Practices which were innovative in nature did not experience as much change as did practices grouped as managerial in nature. The greatest change in participant use of practices as a result of program participation were for: selecting replacements on the basis of weaning weights, vaccinating cows for IBR, and calendarizing beef-cow operation.

Heitz, R.E. (1984). A comparison of factors that influence student selection of post-secondary agriculture curricula. Master of Science Thesis. Iowa State University, Ames.

The purpose of this investigation was to identify selected factors that influenced students' choices of a community college agriculture program. Data were collected using a questionnaire. A sample of 190 students enrolled in four agriculture program areas in 16 post-secondary institutions in Iowa responded to the questionnaire. Five people and activities had major influence on the respondents decisions to enroll in an agricultural program at a community college; namely, personal college visitation, parents, past students' recommendations, friends, and personal visitation by agriculture staff from a community college. The four features of the community college that had the most influence on students' enrollment were on-the-job training, proximity of the college to the students' homes, college appearance, and financial aids offered at the college. Respondents indicated that subject practicality, college program hands-on opportunities, program reputation, and the agricultural department facilities were program features that had influenced their decision to enroll in a community college. Attending a community college visitation day, visiting friends, attending a community college open house, and attending sports events were cited by the respondents for visiting a community college campus prior to enrolling in the college.

Jipp, R.A. (1983). Iowa high school vocational agriculture senior's perceptions of vocational agriculture. Master of Science Thesis. Iowa State University, Ames.

The perceptions of Iowa high school seniors enrolled in vocational agriculture toward teaching vocational agriculture as a career was the focus of this study. Respondents for the study were 166 vocational agriculture seniors in 21 randomly selected schools in the Northwest Iowa Vocational Agriculture Teachers Association District. A questionnaire was developed to measure student's perceptions of the effect of selected job responsibilities of a vocational agriculture teacher on respondents decisions to pursue a career in agricultural education. Teachers in the sample schools were directed to administer the questionnaire.

The findings revealed that teacher responsibilities related to FFA were perceived as encouraging students to enter agricultural education. The "involvement in a school vocational agriculture/ FFA farm" and "involvement in fairs and exhibits" received the highest ratings, indicating strong encouragement of a career in agricultural education. General vocational agriculture teaching responsibilities were also perceived as encouraging students to enter a career in agricultural education. The only teacher responsibilities perceived by respondents as slightly discouraging a career in agricultural education were "performing assigned school tasks" (study hall monitor, school dance chaperone, etc.), "duties to be performed in the evenings and/or weekends", and "role of preparing administrative reports". It was recommended that vocational agriculture teachers be reminded of the impact their job portrayal has upon teacher recruitment and, therefore, portray their responsibilities in a positive and realistic manner.

King, D.W. (1984). Problems and concerns of vocational agricultural instructors in Georgia. Master of Science Thesis. Iowa State University, Ames.

The major objectives of this study were to: (1) identify the major problems instructors encounter in administering vocational agriculture programs, conducting classroom and laboratory instruction, advising the local chapter of the Future Farmers of America, conducting supervised occupational experience programs and, (2) compare the problems encountered by instructors according to educational level, age, years of teaching experience, student enrollment in vocational agriculture and school, number of classes taught each day, type of community in which the instructor was reared, and quarter or semester course structure.

A total of 150 vocational agriculture instructors was selected at random from the population of 270 in the 1983-84 school year. A questionnaire consisting of 92 specific tasks was developed and mailed to each member of the sample. Two follow-up mailings were conducted to encourage participation. A total of 95 (63.3%) complete and usable questionnaires were returned.

Although no area of the vocational agriculture program caused major difficulties for instructors, the program area rated as most difficult was "Young and/or adult farmers". The five most difficult tasks as perceived by the instructors were: implementing computerized instruction into the total vocational agriculture program, requiring participation in supervised occupational experience by all students, securing young and/or adult farmer enrollment, teaching students with different ability levels, and conducting year-round adult programs. The independent variables studies were not significantly related to the perceptions of the instructors.

Miller, D.G. (1984). A comparison of Dairy Herd Improvement Program participants and nonparticipants in the Starmont Community School District. Master of Science Thesis. Iowa State University, Ames.

The purpose of this study was to determine the effect of the DHI program on the operations of producers enrolled in the program in the Starmont Community School District in Iowa. A survey instrument was developed and sent to all 116 dairy producers in the school district. Eighty-five (73%) of the producers completed and returned the instrument. It was observed that DHI participants: 1) had larger dairy herds, 2) had a higher percentage of registered cattle in their herds, 3) had a higher mean for average annual production, 4) raised a higher percentage of herd replacements, and 5) placed more emphasis on the use of records in their operations. Personal contacts by DHI supervisors and the personal desire to improve production motivated producers to enroll in the program. Producers used DHI information primarily to monitor production and cull low producing cows. Producers indicated that they discontinued their participation in the DHI program because of program costs and problems with the local DHI supervisor. Nonparticipants did not enroll in the program because of program costs and the time required to run tests.

Ramirez, R.G. (1983). Perceptions of agriculturalists in Costa Rica on the use of television in pesticide education. Master of Science Thesis. Iowa State University, Ames.

This study was designed to obtain perceptions of agriculturalists in Costa Rica on the use of television for pesticide education. A sample of 172 farmers, 28 farm-laborers, 11 Peace Corps volunteers, 9 agricultural teachers, 9 extensionists, and 96 agricultural agents, from the five regions of the country was selected to participate in the study. A questionnaire was developed and used to collect data at scheduled group meetings.

The findings revealed that 77 percent of the farmers and farm-laborers had learned about pesticides prior to viewing the television film, but only 38 percent declared that they knew how to use those products correctly. A major (82) percent of the farmers and farm-laborers possessed television sets and watched them in their own homes. A majority of the agricultural professionals (Peace Corps volunteers, agricultural teachers, extensionists and agricultural agents) considered the film very effective in teaching farmers about correct use of pesticides. These professionals reported that more television programs are needed and that the best time of the day to have such programs is 6 to 9 p.m. on weekdays, 3 to 6 p.m. on Saturdays and 3 to 6 p.m. on Sundays. The study concluded that television can be used successfully to teach agricultural topics to Costa Rican farmers if the medium is properly managed.

Richardson, J.G. (1984). Attitudes of Iowa Cooperative Extension Service personnel toward microcomputer technology. Doctor of Philosophy Dissertation, Iowa State University, Ames.

This descriptive study was designed to ascertain the attitudes of Iowa Cooperative Extension Service personnel toward the use of microcomputers and determine the training needs of Extension personnel in microcomputer technology. The study, was conducted as a joint effort between Iowa Agriculture and Home Economics Experiment Station Projects 2617 and 2514. Hypotheses were tested relating to the differences in the attitudes of Extension personnel toward the use of microcomputers in Extension work and in perceived training needs when grouped by level of assignment, program area, and selected demographic information.

A census of the population of Iowa Cooperative Extension Service personnel was conducted using a mailed questionnaire developed for the study. A return rate of 87.7 percent was achieved. Mean scale scores were computed for the total sample and subgroups. One-way analyses of variance and t-tests were performed on the attitude scales. Chi-square analyses were performed on perceived training

needs data. A multiple regression analysis for predictability was completed.

Means indicated a positive attitude and homogeneity towards microcomputer technology by all groups tested. Attitudes could not be predicted using the indicated groupings. The preferred type of microcomputer training was in using specific software programs and the preferred form was inservice education.

Implications for this study are: (1) the homogeneity of Iowa Cooperative Extension Service personnel will allow microcomputer education to be planned for a broad cross-section of people, county and area levels; and (2) more study is needed to determine microcomputer competencies necessary for Extension work.

Rosati, R.R. (1984). Administrators' perceptions of national issues in agricultural education. Doctor of Philosophy Dissertation. Iowa State University, Ames.

The purposes of this study were to determine principal and superintendent perceptions of selected national issues in agricultural education, and to compare these perceptions with the perceptions of teachers, teacher educators, and state supervisors. A national sample of 293 was selected from nominations made by the state officers of the National Association of Secondary School Principals, and chief officers of the Chartered State Association of School Administrators, and the state chief school officers. Data were collected by a two-part survey instrument. Part I collected demographic information. Part II consisted of a series of issues identified by the participants at the 1980 National Agricultural Education Seminar. Participants responded to each issue stating their degree of agreement or disagreement on a six-point Likert type scale.

Principals and superintendents considered avocational education to be a purpose of agricultural education, whereas this was not true for teachers, teacher educators and state supervisors. A greater number of teachers, teacher educators and state supervisors as opposed to principals and superintendents agreed that agricultural education should serve out-of-school youth and adults, and handicapped students. More principals and superintendents, as opposed to teachers, teacher educators, and state supervisors agreed that only those vocational students who desire to become FFA members should be members. More principals and superintendents, as opposed to teachers, teacher educators, and state supervisors agreed that many FFA activities were inappropriate for in-class instructional time. More principals and superintendents, when compared to teachers, teacher educators and state supervisors, agreed with the program title, "agricultural education" and "agriculture/agribusiness education".

Russell, D.H. (1984). An evaluation of farm management micro-computer-assisted instruction in Iowa Vocational Agriculture programs. Master of Science Thesis. Iowa State University, Ames.

Many educators recognize that computer-assisted instruction may be an important part of the total vocational agriculture program in the future. The purpose of this study was to determine the effectiveness of microcomputer-assisted instruction when teaching farm management and agricultural marketing. Microcomputer-assisted instruction materials were prepared to teach concepts and problem solving. Two teaching methods were compared using a pretest/posttest experimental design. One hundred twelve vo-ag teachers participated in this study.

From the analysis of covariance, the following conclusions were drawn: (1) There were no significant differences in posttest scores for farm management and agricultural marketing concepts when comparing teaching methods, (2) The teaching method did significantly affect the posttest scores when teaching farm management problems. This was not true for agricultural marketing problems, (3) The years of teaching experience, hours of classroom computerized instruction used in prior years, hours of VisiCalc used in prior years did not significantly affect the posttest scores.

Sunderhaus, T.L. (1984). Problems and concerns of Vocational Agriculture instructors in Indiana. Master of Science Thesis. Iowa State University, Ames.

The job of a vocational agriculture instructor is not an easy one. On a daily basis the instructor is faced with many problems and concerns. Teacher educators are concerned with determining the problem areas that vocational agriculture instructors face. When these problems are identified, changes can then be made to better prepare the prospective teacher for the profession and steps can be taken to improve in-service programs.

The purpose of this study was to identify organizational and instructional problems of vocational agriculture instructors in Indiana. A questionnaire was sent to 152 vocational agriculture instructors. The questionnaire consisted of ninety-nine job tasks which were divided into six major task area: administration of vocational agriculture programs, classroom and laboratory instruction, supervised occupational experience programs, FFA activities, adult programs, and young farmer programs. All Cronbach Alpha coefficients for each tasks area wer .92 or above, indicating that the items within each of the areas were consistent and closely related. The Cronbach Alpha for the combined task areas was .99.

This study revealed that the most difficult task areas for Indiana vocational agriculture instructors were adult programs, supervised occupational experience, and young farmer programs. The least difficult tasks area was Future Farmers of America (FFA) activities. Variables such as teaching experience, farming experience, previous vocational agriculture and FFA experience, and the number of students enrolled in the vocational agriculture program were also examined.

Umaña-Segura, F.J. (1984). An assessment of the professional competencies needed by agricultural extension agents in Costa Rica. Master of Science Thesis. Iowa State University, Ames.

Determining professional competency training needs of agricultural extension personnel in Costa Rica was the overall purpose of this study. A sample of 10 agricultural extension directors and 33 agricultural extension agents, responding to mailed questionnaires, provided information upon which to satisfy the purpose and objectives of the study. It was observed that years of employment in extension made a difference in the ratings of competencies studied. Job title, age, and years of employment in extension had no effect on program planning, program execution, teaching, communication, maintaining professionalism, evaluation, and 4-S youth competencies. Sixty-eight of the 97 competencies studied were rated 4.0 or higher (on a five point scale). The remaining competencies were rated 3.0 or higher.

Wiggins, T.A. (1984). The effect of teaching method or student characteristics on student achievement or attitude in a BASIC computer programming undergraduate course in agricultural mechanization at Iowa State University. Doctor of Philosophy Dissertation. Iowa State University, Ames.

Extensive research has been conducted comparing computer-assisted instruction to other types of instruction. However, very little research has been conducted on the factors affecting the development of computer skills, achievement or attitudes. These factors have not yet been identified for computer usage or programming in agriculturally related fields.

During two successive semesters, 103 college students in a BASIC programming course in agricultural mechanization were enrolled in classes which were randomly assigned as experimental or control groups. The control group received instruction by the traditional lecture method, while the experimental group received instruction by computer-assisted instructional materials. A pretest and post-test were administered.

From the analysis of covariance, the following conclusions were drawn: (1) There was no significant difference in attitude or knowledge scores when the students were grouped by teaching method; (2) There was a significant difference in posttest knowledge scores when the students were grouped by pretest attitude score, semesters of vocational agriculture, subject in which students made their highest and lowest grade in high school, average secondary and post-secondary math grade, student classification, student major, video game experience, occupational plans, or the person influencing the student to take the course; and (3) There was a significant difference in posttest attitude scores when the students were grouped by typing ability or computer experience.

Wyatt, G.J. (1984). Microcomputer instruction in Iowa vocational agriculture programs. Master of Science Thesis. Iowa State University, Ames.

The purpose of this study was to determine the extent of use of microcomputers in Iowa vocational agriculture programs. A questionnaire was developed and sent to two instructor groups - those who had used microcomputers in their instructional programs and those who had not used them in their instructional programs. Instructors with computers were: younger, less experienced, less educated, attended more inservice activities, and had more students. In contrast, instructors who had not used microcomputers in their instructional programs were older, more experienced, more educated, attended fewer inservice activities, had fewer students, and had more formal instruction on the use of computers. Instructors with computers indiciated that the lack of teaching materials and the location of the computer(s) in the school were major problems for them in using computers in their instructional programs.

MARYLAND

Harrod, H.L., & Cooper, E.L. (1984). Agriculture employment needs assesement in St. Mary's, Charles, Calvert and Anne Arundel counties, Maryland. Master's thesis. University of Maryland, College Park.

The purpose of this study was to determine the employment and entrepreneurship needs in agriculture in St. Mary's, Charles, Calvert and Anne Arundel Counties in Maryland. Such a study was needed to identify the number of current and future workers in positions which require agriculture competencies. From employment trend information, vocational agriculture/agribusiness programs can be revised to provide skills needed for employment in the agriculture/agribusiness industry.

The study consisted of two different surveys mailed to farmers and agribusinesses in each county. All agribusinesses in each county were surveyed and non-respondents were followed up by a telephone interview or on-site visit. Computer and calculators were used to process the data.

From the findings of this study, it was concluded that in St. Mary's County, Maryland, there were an estimated 7,188 current workers needing agricultural competencies. Similarly, in Charles County, Maryland, there were an estimated 4,608 current workers; in Calvert County, Maryland, an estimated 4,890 current workers, and in Anne Arundel County, Maryland, an estimated 3,504 current workers. Other data such as number of full-time and part-time workers, paid and non-paid workers and workers by farm and agribusiness division were reported.

It was concluded that farm and agribusiness employers were generally satisfied with the attitudes and skills of their workers. Finally, the data indicated that a relatively low proportion of agricultural employees have had formal education in agriculture in high school or college.

Smick, R.A., & Seibel, R.J. (1984). A national study of FFA membership and non-enrollment in vocational agriculture courses. Master's thesis. University of Maryland, College Park.

This study was conducted as a cooperative venture between the National FFA Center and the University of Maryland. The purpose of the study was to determine if high school FFA membership without concurrent enrollment in vocational agriculture exists and if so, the reasons for the occurrence. Both a nationwide survey of agriculture teachers/FFA chapter advisors and the development of a survey instrument for use in gathering data from FFA members were part of this study.

A random sample of 425 FFA chapters nationwide was drawn. Results were based on responses of 269 vocational agriculture/ FFA chapter advisors from 42 states and provinces served by the National FFA Organization.

Data were collected via a mail questionnaire which consisted of 15 questions and from the National FFA Center in Alexandria, Virginia. Parametric and non-parametric statistics were performed on the data.

The salient findings were: (1) High school FFA membership exists without concurrent enrollment in vocational agriculture in every FFA region and in each grade level. (2) The factor that significantly influences FFA membership without vocational agriculture enrollment appears to be scheduling conflicts within the school day. (3) A proposed constitutional change to require vocational agriculture enrollment and a SOEP for high school membership in FFA is predicted to have a varied impact on the chapters. Among teachers, 55% (149) indicated they would favor the change, 42% (113) would not favor the change and 3% (7) were undecided. (4) The majority, 74%, (199) of the vocational agriculture teachers/FFA chapter advisors indicated it was their job to work with FFA members who were not currently enrolled in vocational agriculture classes. (5) There are situations or circumstances that prevent high school FFA members from enrolling in vocational agriculture courses. Those found in the study tend to fall into two general categories: increased requirements and decreased flexibility for college bound students; and a trend to increase academic requirements for all high school graduates.

MICHIGAN

Doyle, M.V., & Davis, D.T. (1984). A survey of MSU faculty and administration relative to their perceptions of the CANR insert in the faculty news bulletin. Agricultural experiment station study. Michigan State University, East Lansing.

Readership studies of specialized publications in general are sparse, and studies of agricultural publications in particular are almost non-existent. The purpose of this study was to determine the communication efficacy of the four-page MSU News Bulletin insert published annually by the College of Agriculture and Natural Resources and designed to help the College communicate with all phases of the University.

A 28-item survey questionnaire was sent to a stratified sample (faculty and administrators) of the University population who normally read the News Bulletin. Students were not included.

Findings of the study were separated into the following parts: (1) a demographic and psychographic profile of the respondents as it emerged from the survey; (2) patterns of the respondents' interpersonal and mass communication behavior; (3) the respondents' attitudes and opinions about a selected issue of the MSU News Bulletin insert; and (4) the respondents' attitudes and opinions about future issues of the inserts.

Based on a systematic analysis of the data, several major conclusions were noted. First, about 60 percent of the MSU faculty-administrator community read the insert, with no discernible relationship between readership and MSU status or sex. Second, while it is difficult to pinpoint precise reasons why respondents read the 1984 insert, the data suggests relationships exist between readership and the respondents' need for additional information about food supplies and the preservation of natural resources. Third, respondents who did not read the 1984 insert indicated they simply had not remembered seeing the insert and non-readership had little to do with negative content or design aspects. Fourth, agricultural issues (safe and plentiful food supplies and the preservation of natural resources) are quite important personal agenda items to the respondents, suggesting strong readership interest in these topics. Fifth, only the MSU State News, a daily campus newspaper, ranks higher as an information source about agriculture and natural resources than the CANR insert.

The design of this shelter was done by the researcher for Dr. M. Wayne Adams, professor of the department of Crop and Soil Science at Michigan State University (MSU). Federally funded, the construction and use of the shelter were done in cooperation with the Mexican Government.

The use of a rainout shelter has two major implications in the area of education. One direct connection is its use as a research tool. In this way, the shelter is mainly utilized in a technical sense. Experiments, which are conducted by post secondary and higher level educational students, provide data which is applicable in the field. The other area of education which the shelter would be helpful in is informal agricultural education.

Mohamed, Abdullahi A. (1984) A study of the extension training needed as perceived by former extension professionals currently studying in the United States. Masters research paper. Michigan State University, East Lansing.

The purpose of the study was to provide information about the educational needs of the extension staff at the regional and district level so as to increase the quality of service provided by the extension service in Somalia.

The major objective of the study was to determine the in-service training needed by extension professionals as perceived by former extension officers and coordinators, in order to provide improved assistance to extension's clientele. Three competency areas identified for the study were: 1) program planning, 2) program implementation, 3) program evaluation.

A survey instrument was used to collect information about the training needed as perceived by all former Somali extension technical staff who were studying in the United States. Data were analyzed using frequency distribution. A likert-type of scale, ranging from low to very high, was used in the study.

When former extension coordinators and officers were asked to identify the training needed to improve competency in the three areas, there was a general agreement that there was a high need for the extension professionals to possess additional competency in all of the three competency areas, to increase the quality of service provided by the extension service to its clientele.

The frequency distribution used in this study, ranging from a low which was represented by (1) to a very high represented by (4), showed a group mean value of 3.64 in program planning, 3.65 in program implementation, and 3.69 in program evaluation. Therefore, it was concluded that there was a high need to improve competency in all of the three competency areas identified in the study.

Bhuju, U. R. (1984). Conservation strategies of Nepal, 1951-1985 Masters thesis. Michigan State University, East Lansing.

The purpose of the study was to describe and analyze conservation strategies advocated by HMG in the national development plans during 1951-85. The strategies, i.e., objectives, priority, budget, organization, technical areas for emphasis, people's participation, and legislation, were chronologically reviewed and compared for each plan period.

Harrison, William A., An analysis of the county extension director's administrative role in Michigan. Doctoral Dissertation. Michigan State University, East Lansing.

The general purposes of this study were: (1) to define the role of the county Extension director in Michigan as viewed by county Extension directors, other Extension workers, and county government Cooperative Extension Service contact persons; (2) to obtain information to help Extension personnel gain a better understanding of the relationships between the selected study groups; and (3) to provide Michigan Extension administrators with additional information on which to base performance evaluations.

The data were obtained from a mailed questionnaire returned by 171 Michigan Extension workers and 48 county government CES contact persons on the job in April 1983. The questionnaire provided opportunity for the respondents to record their judgment concerning the extent to which 172 possible role-definition items were a part of the job of a county Extension director. The questionnaire was similar to the one used by Caul (1960) but with additional items to reflect comtemporary issues and social responsibilities that the Cooperative Extension Service has in the 1980s. Each respondent was asked to record, on an eight-point scale, his/her evaluation of the extent he/she perceived the role-definition item to be a part of the county Extension director's role.

All administrative processes studied were important, but emphasis was placed on the county Extension director's functions in the following order: (1) business management and finance, (2) educational leadership, (3) organization and policy, (4) direction and coordination, (5) planning and programming, (6) administrative relations, (7) personnel management, and (8) supervision. The rankings reported in this study were not different from the Caul study (1960). County Extension directors viewed their administrative role differently than did county Extension agents and state Extension administrators. These differences were observed in three administrative processes with county Extension agents and in four administrative areas with state Extension administrators. Age, staff size, Extension experience, formal education, or time spent on administration did not change the county Extension directors' view of their administrative role.

Martin, Edward C., Rainout Shelter: Design and use. Masters Research paper. Michigan State University.

The purpose of this study was to develop techniques and design equipment for excluding natural rainfall from experimental plots, while retaining the advantages of practical field studies. One underlying objective was to obtain greater research efficiency. It was, therefore, desirable to design a structure which could accommodate both the researcher and his/her required apparatuses.

Conservation was one of the sectors in the plans during the period 1951-85. Its strategies during 1950s and 1960s were inclined towards government control and people's participation in implementation. During 1970s, the strategies were modified with an appreciation of conservation through the preventive technical measures and the mutual cooperation between government and the people.

By the turn of 1980s, conservation was upgraded to the top priority national program supported with appropriate legislation so that people could participate at all levels.

MINNESOTA

Bartel, J. (1983). Applications of DB Master for adult farm management instructors. M.Ed. integrating paper. University of Minnesota, St. Paul.

The purpose of this paper was to assist instructors in using DB Master by providing an overview of purpose and design, illustrated applications for farm management instructors, a critical analysis of DB Master and support materials and recommendations for users.

The procedure involved use of DB Master in administration of an adult farm management program. Applications included mailing lists, tuition management, on-site instruction records, and so on.

Problems encountered in use were: (1) an instructional manual that is not easily read, (2) lack of a convenient reference guide to commands, (3) multiple disk manipulation, and (4) time to learn how to use the system appears high for a computer novice. The system's advantages appear to be for large file data bases, not a typical adult education program. Less complicated and expensive data bases were judged to exist for farm management instructors.

Cashman, K.M. (1984). The relevance of regenerative agriculture for student experiential training in U.S. land-grant institutions. Master of arts paper. University of Minnesota, St. Paul.

The problem was to identify and describe the need for implementation of field experiences which enable students from developing countries to make appropriate translations of the training they receive in the U.S. system to the agricultural situation they will confront when they return home.

Data was collected through 28 taped, ethnographic interviews. The interview covered: the student's background, the agricultural situtation in their country, and their training in technical agriculture at the University of Minnesota. Following content analysis of the communication to qualify the responses, summaries were presented and frequency distribution of selected response categories were presented.

The findings included:

1. The farming system inherent in each student's country was identified with a set of mostly biological processes and management activities organized to produce a diversity of plant and animal products that kept risk at a minimum.
2. A typical farm included a combination of varied components suggesting teamwork and interaction among scientists and technologists. The students felt themselves to be too highly specialized. Training lacked emphasis on the interactions between crop and animals.
3. Individuals from developing countries, the majority of whom are from the city, are unprepared to deal with local problems in their countries, especially since most lacked any relevant field experience.

4. Technologies and methods developed through field experiences should be designed for recommendation to limited resource farmers. Students should learn in a farm setting to allow evaluation at every stage of application in an integrated system, avoiding the transfer assumption.
5. Regenerative agriculture is closely allied to the resources and conditions of the majority of farmers in developing countries.

Iortima, P. (1984). An analysis of the cooperative movement in Nigeria. M.Ed. integrating paper. University of Minnesota, St. Paul.

The purpose of this paper was to analyze problems faced by cooperatives in Nigeria. The method of analysis included historical review of cooperative activities in Nigeria and comparison with the organizational principles and operation of cooperatives in the United States.

The major findings were: (1) The Nigerian government intervened in all the cooperative matters and activities initiated by the people for their own economic well-being. (2) The government attention was on improving the internal situation in the ministries or departments of cooperatives rather than making sure that the cooperative organizations were operated properly. (3) The cooperatives have not been organized in accordance with the Rochdale principles which are responsible for the success of cooperatives in other countries such as the United States. (4) The marketing cooperatives and production cooperatives are faced with the problem of obtaining production inputs because Nigeria does not have a well developed, private agri-business sector that supplies the inputs needed for farming. (5) The cooperatives do not have an organizational structure that extends from the local level, through the state and national levels. The lack of the member representation at these levels may be responsilbe for the control of cooperatives by the government. (6) There is no bank of cooperatives responsible solely for advancing loans to members or patrons. (7) There are no educational programs that teach students the principles of cooperatives.

Okunnuga, D.A. (1984). A comparison of the functions and the role of an agricultural extension agent in Nigeria and in Minnesota. M.Ed. integrating paper. University of Minnesota, St. Paul.

This paper was an effort to identify ways to improve the effectiveness of agricultural extension agents. The role and functions of agricultural extension agents in Nigeria and Minnesota were compared. The procedure involved a review of agency literature related to policies and job definition. Interviews were conducted with four Minnesota extension agents to clarify their perception of role and functions and to identify problems they encounter relative to role and functions.

The functions and the role of agricultural extension agents in Nigeria and Minnesota are similar. The primary difference is how they go about their duties. This difference can be attributed to the difference in organizational patterns. The organizational structure of the extension service in Nigeria is complex, and the flow of information is vertical. In Minnesota, the agricultural extension organization is not as complex and the horizontal method of information dissemination is adopted.

Two problems appeared common to extension agents in Nigeria and in Minnesota. There is a shortage of extension agents leading to overwork for the existing agents. Assembling farmers for a meeting is difficult because farmers are busy and the agents compete for meetings with farmers with other commercial agribusiness organizations.

Virakul, Busaya (1984). A study of stimulation to pig production in developing countries. MEd integrating paper. University of Minnesota, St. Paul.

Swine production plays a major role in providing animal protein in many developing tropical and subtropical countries. Where religion does not forbid pork consumption, it is a livestock enterprise ideally suited to small farms since pigs grow quickly, are ecnomical feed converters and have a high reproductive rate. Total productivity in the developing countries however, is estimated to be 30-50 percent below rates achieved in temperate climates due to slow growth rates and poor reproductive performance.

The objective of this study was to examine alternative models of education and resource allocation to determine if a strategy could be recommended that would address the need to improve productive performance in tropical swine production in developing countries.

Particular attention was paid to productivity gains that would be possible through modified feeding programs, improved genetic qualities and better herd health management (including disease prevention). Within the context of these improvements, the role of various education or education related activity was examined including all levels of activity from the laboratory to the field (i.e. research, animal scientists, extension).

The suggested strategy for improved productivity places major emphasis on directing the effort (limited by resources) to the commercial rather than the subsistance farmer under the assumption that the normal process of information flow would eventually reach the subsistance farmer. Some activities to implement the growth in productivity are: 1. Collect and disseminate feed and feeding information relevant to local areas, 2. Establish A-I facilities to top producers who can produce brood stock, 3. Establish simple performance testing programs 4. Provide consultation for herd health control, 5. Target extension programs to specific producer groups by level of competence, 6. Establish communication network among producers and, 7. Provide coordination among the manpower skilled in pig production: university, research station, extension and producer.

MISSISSIPPI

Bowen, B. E. & Agnew, D. M. (1984). Classroom testing by microcomputer: The effect upon student performance and attitude. Staff study. Mississippi State University, Mississippi State.

Few researchers have investigated the effects of microcomputer technology under classroom conditions. This study explored what effect a microcomputer would have as it performed one classroom function. Specifically, the researchers studied the effect taking an objective final evaluation by microcomputer would have upon student performance, attitude, and time needed for the evaluation.

The study followed the post-test only control group design and had two replications. Replication I consisted of 49 subjects and was conducted the 1983 Fall Semester during a graduate/undergraduate course about computer applications for agricultural education. Replication II involved 38 subjects enrolled in the same course during the 1984 Spring Semester. The same instructor taught the Mississippi State University course both semesters and students were randomly assigned to treatment or control groups. The evaluation was administered using commercially prepared testing software on the same microcomputers students had used during the course. The control group took the same evaluation using test booklets and optical scan sheets. Immediately after the evaluation, students completed an instrument to measure their attitudes toward computers.

The method of testing did not significantly influence scores on the evaluation when midterm scores were used as a covariate. No significant difference was found in attitudes about computers (both groups had high positive attitudes). The microcomputer testing group needed significantly more minutes in Replication I, but not in Replication II. The researchers concluded that students tested by microcomputer performed as well and had as positive attitudes as students tested with conventional procedures. The primary recommendation was that additional research with other subjects is needed to see if similar findings result. Time needed for the two testing methods also merits further study.

Prokati, W. (1983). Selected professional competency needs of district Extension officers in the northern Extension region of Thailand. Doctoral dissertation. Mississippi State University, Mississippi State.

This study was to determine the professional competencies needed by the District Agricultural Extension Officers (DAEOs) in the Northern Extension Region of Thailand. Respondents were 114 of 154 DAEOs in this region. The questionnaire used to collect data consisted of four biographical information questions, 63

professional competency items, and an assessment of training needed in these competencies. The statistical procedures used in analyzing data were frequency distribution, factor analysis, and one-way analysis of variance.

Findings indicated needs in all the competencies included in the questionnaire. The most important competencies were identified as use of Extension principles, farm and home visits, demonstrations, and supervision principles; development of long term projects; determination of district program goals and objectives; knowledge of how policy is formulated; and helping sub-district Extension workers plan their Extension programs.

Nine factors were extracted by factor analysis: administration, teaching, individual and small group communication, use of mass media and audiovisuals, program planning, leadership, use of available resources, personal contact, and public relations. Comparison of each factor on the basis of biographical information indicated a need for more training in the administrative factor for officers 30 years of age or younger, as well as more needs in the teaching factor for officers trained in the Plant Science major.

It is recommended that all competencies in this study be included in the training curriculum for the DAEOs. Items contributing to the administrative factor should be emphasized in the pre-service training for all new DAEOs. In addition, training in the teaching factor should be arranged for the DAEOs who majored in areas other than Agricultural Extension. In-service training is also recommended for those items included in the priority training needs areas.

Al-Mogel, A.I. (1984). Factors associated with the adoption of recommended farm practices among wheat growing farmers in Al-Hasa, Saudi Arabia. Doctoral dissertation. University of Missouri-Columbia.

The primary purpose of this study was to ascertain the possible association between the adoption of farm practices and certain characteristics of farmers of Saudi Arabia. The secondary purposes were: (1) to study the relationship between the adoption of farm practices and farmers' perceptions about extension, credit and loan services, and changes in farming; (2) to investigate the relationship of the exposure to sources of agricultural information and the adoption of farm practices; (3) to study the relationship between the total perception score and selected characteristics; and (4) to ascertain the amount of variance in adoption of practices explained by selected variables.

Data were collected from 80 farmers using an instrument administered during a personal interview. Pearson product moment coefficients and regression analysis were used to test the null hypotheses.

Significant positive relationships were found between the adoption of farm practices and gross farm income, amount of land in production, and exposure to sources of agricultural information. No significant relationships were found between the adoption of practices and the respondent's perceptions about extension, credit and loan services, or changes in farming. No significant relationships were found between the total perception score and characteristics of farmers. A combination of all variables contributed significantly to the variability of the adoption scores.

Farmers most likely to adopt farm practices were those who had characteristics such as a higher gross farm income, a larger amount of land in production, and used many sources of agricultural information.

Heiman, T.W. (1983). Articulation activities between Missouri secondary and two-year postsecondary vocational agriculture programs. Doctoral dissertation. University of Missouri-Columbia.

The purpose of the study was to identify current and needed articulation practices between Missouri secondary and postsecondary vocational agriculture programs. Questions investigated related to what extent:

1) could selected activities promote articulation between secondary and postsecondary vocational agriculture programs?

2) have selected articulation activities been implemented between secondary and postsecondary vocational agriculture programs?

3) do the perceptions of secondary and postsecondary vocational agriculture teachers differ when identifying priority activities for articulation?

The sample included 133 secondary and 23 postsecondary Missouri vocational agriculture teachers. The dependent variables were 19 articulation activities identified by a jury of experts. The instrument was field tested and modified as needed. The instrument reliability for the study was .89 for the importance rating of articulation activities and .89 for the current level of articulation implementation. The independent variables consisted of responses from 151 secondary and postsecondary Missouri vocational agriculture teachers for a 97 percent return rate.

Multivariate analysis of variance was the primary statistical method. The multivariate analysis of variance was followed by analysis of variance if the variables produced a significant value.

1) Both secondary and postsecondary vocational agriculture teachers perceived articulation to be important. 2) Postsecondary vocational agriculture teachers perceived articulation activities to be more important than did secondary vocational agriculture teachers. 3) Both secondary and postsecondary vocational agriculture teachers believed that the current level of articulation activity in Missouri was limited. 4) Secondary vocational agriculture teachers indicated that the current level of articulation activity was greater than did postsecondary teachers. 5) Postsecondary vocational agriculture teachers perceived a greater need for articulation activities than did secondary vocational agriculture teachers.

Hunter, W.P. (1983). Net farm income related to cost/return factors in a farm business management analysis program. Doctoral dissertation. University of Missouri-Columbia.

The purpose of the study was to examine the relationship of various cost and return factors to net farm income. Research questions were formulated related to net farm income and the factors of: crop returns, livestock returns, custom work, non-farm income, variable crop costs, power and equipment costs, building costs, labor costs, and other costs (including interest, miscellaneous cash costs, etc.).

The population used in the study consisted of Missouri farmers enrolled in the Farm Business Management Analysis (FBMA) program, an educational program for young and adult farmers administered by Agricultural Education at the University of Missouri-Columbia. Data utilized in the study represented summaries of farm records kept by enrollees for the years 1981 and 1982, which were submitted for computer analysis and which met certain standards for accuracy and completeness. Data analyzed included record summaries for 57 farms for 1981 and 61 farms for 1982.

The study utilized stepwise regression analysis and discriminant analysis to analyze the data with an alpha level of .05. Significant relationships were found between net farm income and livestock returns and net farm income and building costs for both years. Significant relationships were also found for non-farm income, crop returns, labor costs, other costs, and variable crop costs, but for only one year or for only one of the two analyses.

1) Because of the significance of the relationship of livestock returns to net farm income, FBMA enrollees who have low net farm income should concentrate on improving their livestock returns. 2) Because of the significance of the relationship of building costs to net farm income, FBMA enrollees who have low net farm income should also concentrate on keeping their building costs low. 3) Because non-farm income, crop returns, labor costs, other costs, and variable crop costs displayed a significant relationship to net farm income for one of the two statistical techniques used or for one but not both years, these factors may vary more with year to year changes in the economic climate, weather, or other factors. Enrollees who have low net farm income should use caution in adjusting these factors for their farm businesses.

Lamb, W.A. (1984). Variables affecting laboratory planning and operation in Missouri vocational agriculture programs and their significant relationships on management and safety. Doctoral dissertation. University of Missouri-Columbia.

The purpose of this study was to analyze the variables affecting shop management. The following questions were addressed: 1. What was the size of the agricultural mechanics laboratories of the state of Missouri? 2. What was the amount and type of equipment, and who were the manufacturers of equipment in Missouri agricultural mechanics laboratories? 3. What were the various states' facility planning recommendations and standards?

The population for the study included the 236 schools in Missouri offering vocational agriculture in 1980-81. The facilities

and equipment of 30 shops were studied and the findings were compared to planning procedures collected from the 50 states.

The average shop in Missouri contained 3,002 square feet. The average number of work stations were: welding, twelve; metalworking, two; tool sharpening, two; and woodworking, two. The shop equipment was manufactured by 157 different companies. The mean of the minimum shop specifications for the 40 reporting states were: shop space, 3,088 ft^2; shop area/student, 160 ft^2; storage, 560 ft^2; and lighting, 50 footcandles. The average facility lighting of 25.7 footcandles in Missouri shops was significantly different than the standard recommendation. The amount of shop space, budget, years of teaching, number of instructors, number of shop students, and number of shop classes were significantly related to the safety conditions. The size of shops in Missouri was significantly smaller than the sizes recommended in present planning documents.

Robison, J.G. (1984). Net farm income as related to selected profitability indexes for enrollees in the farm business management analysis program in Missouri. Doctoral dissertation. University of Missouri-Columbia.

The purpose of this study was to ascertain if there is a relationship between selected profitability factors and net farm income for data available from the Farm Business Management Analysis program in Missouri. The study examined the relationship of net farm income to: index of gross value farm production per acre, index of crop returns per tillable acre, index of crop yields, index of prices received for major enterprises, index of livestock returns above feed costs per tillable acre, index of non-feed cost per tillable acre, gross value of farm production per dollar invested, and livestock returns per 100 dollars feed fed.

The population for this study included those farmers who were enrolled in the FBMA program in the years 1981 and 1982. The data from the 57 farms in 1981 and the 61 farms in 1982 came from enrollees' farm records. These records were checked for completeness and accuracy by the FBMA project director and were submitted for computer analysis.

The study utilized stepwise regression with an alpha level of .05. Significant relationships were found between net farm income and the index of farm production per acre in both 1981 and 1982. When the data were analyzed for livestock farms there was a significant relationship between net farm income and the index of livestock returns per 100 dollars feed fed for the 1981 data and the index of farm production per acre was found to be significant in 1982.

1) Because of the consistant findings among the data for the significance of the index for farm production per acre, the farmers in the FBMA program who have a low net farm income should concentrate on adjusting the variables related to this index.
2) Because of the limited number of variables found to be significantly related to net farm income, the farmer should look to other factors of efficiency on which to base production decisions.

Rohrbach, N.F. (1983). Microcomputer use in teaching graduate students in agricultural education. Doctoral dissertation. University of Missouri-Columbia.

The purpose of the study was to ascertain the effects of using microcomputer-assisted instruction as opposed to the lecture-discussion technique in teaching the principles and methods of cost recovery and investment credit on agricultural assets.

The population used in the study consisted of graduate students in agricultural education at the University of Missouri-Columbia. The control group (lecture-discussion) received instruction for two-hour class sessions on two consecutive days while the treatment groups (microcomputer-assisted) were allowed to spend up to a maximum of four hours with the microcomputer learning modules. All groups were given a written evaluation on the day following the instructional period. The study utilized the KR-20 test for reliability on the written evaluation. A one-way analysis of variance and the Pearson correlation coefficient were used in testing the statistical hypotheses. The Scheffe' test was used to isolate differences among mean scores.

Significant differences were found among mean scores of the three experimental groups. The Scheffe' test revealed that the control group scored significantly higher than either treatment group. The Pearson correlation coefficients revealed that there was no significant relationship between the amount of time spent with the microcomputer-assisted instruction and the test scores of students in the two treatment groups.

The general conclusions drawn were that the lecture-discussion approach was more appropriate in teaching this type of material, that the students' level of experience with microcomputers had no effect on performance, and that the amount of time spent by students subjected to the microcomputer-assisted instruction did not significantly affect their scores when given freedom to select the amount of time spent and when varying levels of prior experience with the material were represented.

MONTANA

Petroff, Arthur R. (1984). Attitudinal Differences: A Study Comparing 4-H Members and Dropouts, Ages 13 to 15, in 16 Montana Counties. Montana State University, Bozeman.

The problem associated with this study was to determine what differences existed between the attitudes of active 4-H members and dropouts in this study toward the 4-H program in Montana. The researcher also wished to determine if there was a correlation between the age a person started 4-H and their length of membership. In addition, the researcher wanted to ascertain the reasons for dropping out of 4-H.

The instrument was developed by the researcher and was sent to 491 present and 410 past 4-H members who were 13 to 15 years of age when enrolled in 4-H. This study included 16 counties in Montana. The data in this study were tested using the Pearson r correlation coefficient and the Chi-squared test of independence.

The results of this testing indicated that an urban or rural domicile made no difference in the respondent's attitude that 4-H was mainly for people from farms and ranches. In addition, age was found to be negatively correlated to length of 4-H membership. The data also indicated that attitudinal differences existed between active 4-H members and dropouts in the areas of: (1) responsibility-building in 4-H, (2) 4-H and 4-H projects being fun and interesting, (3) recommending 4-H to others, (4) parental attitude toward 4-H, (5) 4-H being time consuming, (6) 4-H record books, (7) peer attitude twoard 4-H, (8) parental pressure to stay in 4-H, (9) membership in school organizations, (10) 4-H program repetition, (11) help received in 4-H, (12) interest in school and 4-H, (13) member voice in 4-H planning, (14) peer influence to quit 4-H. The two main reasons given for dropping out of 4-H were: (1) I had too many other things to do and, (2) the club was not very organized.

The major conclusions drawn from this study are that: (1) 4-H may not be for every youth but the 4-H program should explore ways to broaden its appeal while retaining its 4-H image, (2) 4-H and School will vie for young people's time and (3) family participation in 4-H is important to 4-H member retention.

Shelhamer, C. Van. (1984). Effectiveness of SOE in Montana's Vocational Agriculture Programs. Montana Office of Public Instruction, Montana State University, Bozeman.

The purpose of this study was to determine the strengths and weaknesses of SOE in Montana and the extent that vocational

agriculture teachers were using it to enhance this student's education. Three separate groups were used to obtain data for the study: 1) Fifty-four Montana vo-ag teachers who had one or more years of teaching experience in Montana and were presently teaching, 2) One hundred forty-four former vocational agriculture students who had submitted, to the state vocational agricultural office, three or four years of continuous records on their projects for the years 1979 to 1982, 3) All student SOE records which were reported on the Final Report on Farm Experiences and Agriculture-Related Occupational Experiences (Form II) for the years 1975, 79, 80, 81, 82 and 83. The project surveyed the two populations and analyzed the data contained in Form II. The survey instrument contained questions from previous SOE studies which had been completed in the Western AATEA Region.

Even though SOE is recognized by Montana Vocational Agriculture teachers as being an important part of the total vocational agriculture program, they are not effective in getting all of their students involved in SOE. Teachers are more effective in getting students involved in FFA than they are SOE. The teachers have had limited success in getting students with SOE to expand their projects. This in part may be due to the fact that one third of the students do not have in place an SOE within six months of enrolling in vocational agriculture. The need for early establishment of an SOE was supported by the data which suggests that students with four years of records will have a larger project than students with three years. In addition, it was found that all SOE projects will increase the greatest amount between the second and third year of record keeping.

Montana vocational agriculture teachers are making a limited number of on-site instructional visits and are spending a limited amount of time with the students. Freshman students, who probably have the greatest need for on-site instruction, are being visited in lieu of those students who will bring the programs the most recognition through applying for state and national awards. A number of students who were visited indicated that the on-site instruction was not very valuable nor was it very helpful in developing their SOE.

Hendrickson, Roger A. (1984). The Value of SOE Activities in Relationship to Occupational Status o the 1974 to 1984 Belgrade High School Graduates of the Vocational Agriculture Program. Montana State University, Bozeman.

This study was designed to determine the perceptions of the value of SOEP activites by graduates of Belgrade High School who had participated in the total vocational agriculture program. The objectives were to seek information regarding the nature and scope of past SOEP activities and the effect the SOEP activities had on the former student's occupational choice and further

education. A combination open and closed form questionnaire was administered by telephone to obtain data from respondents. Data from the population showed that most of the SOE projects were in the farm placement area with nearly all of the projects being agriculture related. Sixty-one percent of the respondents had participated in some form of formal education since graduation from high school and 54 percent planned to engage in further education. Ninety-six percent of the former students felt that it was little or no help in acquiring the first job and 48.9 percent felt that the SOEP was of little or no help for advancement in their present job. The researcher concluded that 77 percent of the SOE programs were agriculture related. Those respondents with production projects had a scope of between one and 50 head, depending on the type of livestock raised, or less than 50 acres, if they raised crops. The advisor visitations were of little or no help, according to 42 percent of the respondents and 25 percent said that they received no visitations. Sixty percent of the respondents felt that the SOEP had helped them to get their first job after high school and 69 percent felt that it helped them to advance in their present job. Thirty of the 49 respondents were employed in an agriculture related field and half of the respondents planned further formal education.

Welch, Thomas M. (1984). Attitudes of Montana Vocational Educators Toward a Fifth-Year Teacher Preparation Program. Montana State University, Bozeman.

This study determined the perceptions of Montana vocational teachers with one to five years experience, their administrators, and Montana vocational teacher educators about the possible adoption of a fifth-year teacher preparation program for the preparation of vocational teachers in Montana.

The study was a descriptive survey utilizing mailed questionnaires sent to a population of 168 vocational teachers, 109 administrators and 17 teacher educators. The returned questionnaires (80.2%) were statistically analyzed by computer using the Statistical Package for the Social Sciences.

Two-thirds of the respondents recommended the four-year program be used, rather than the fifth-year program, to educate vocational teachers. The majority felt that reforming the present four-year preparation program would result in the best prepared vocational teachers. A longer and earlier occurring student teaching experience was suggested along with more on-the-job experience.

Technical and professional competencies possessed by beginning vocational teachers and the overall adequacy of undergraduate teacher preparation programs in Montana were perceived as good. However, respondents felt that extending vocational teacher preparation programs would increase the quality of vocational teachers and is needed, but would be unfeasible. Students would have to contribute more money and time but would not be rewarded with increased pay or have the public's image of their profession improved.

Connot, R.A. (1984). Personality Type and its Implication for Students in Lincoln Northeast High School, Lincoln, Nebraska. Master's Thesis. University of Nebraska-Lincoln.

It was the purpose of this study to determine if there was a difference between personality type and high school student's: grade point average, participation in clubs and activities, situations in which students learn best, part-time employment, enjoyment of school, class tardiness, and being understood by teachers.

The participants in the study were 383 sophomore students at Lincoln Northeast High School. The Myers-Briggs Type Indicator (MBTI) and a demographic data questionnaire were administered to the students. The following hypotheses were tested. There is no difference between a student's personality type and: 1. grade point average; 2. club involvement; 3. activity involvement; 4. situations in which students learn best; 5. part-time employment; 6. enjoyment of school; 7. class tardiness; 8. being understood by teachers. Data were analyzed by analysis of variance and significance set at the .05 level.

Of the eight null hypotheses, six were rejected. There was a significant difference when comparing personality type to high school students': grade point averages, club involvement, situations in which students learn best, enjoyment of school, class tardiness, and being understood by teachers. This study showed the SP temperament group did not fit as well into the traditional high school setting. Judging (J) students did much better in high school than did Perceivers (P). More students prefer hands-on learning experiences over the traditional classroom offerings. Temperaments SJ and NF enjoyed school, and the SJ group was the least tardy. Both groups of SP and NT felt they were not understood by teachers. Feeling (F) students had higher grade point averages than Thinkers (T), and Judgers (J) had a high GPA than did Perceivers (P). Overall, this study showed students do perform based on functions of their personality. A better understanding of personality type would enhance todays' educational process.

Foster, Richard M., and Miller, W. Wade (1984). Microcomputer competencies needed by vocational agriculture instructors in Nebraska and Iowa. A Joint Staff Research Project, Departments of Agricultural Education, University of Nebraska-Lincoln and Iowa State University.

The role of the microcomputer in agricultural education and in the world of work continues to change almost daily. Steps

must be taken to help vocational agriculture teachers up-grade their microcomputer skills and to integrate microcomputer related instruction into their vocational programs.

The purpose of this study was to identify competencies needed by vocational agriculture instructors to integrate microcomputer technology into the classroom, and to assess the status of microcomputer usage in Nebraska and Iowa vocational agriculture programs. The sample for the study included vocational agriculture instructors who had completed a university sponsored workshop in the use of the microcomputer during 1982-84. Approximately forty-five percent of all Nebraska teachers and forty-three percent of all Iowa teachers were included in the study.

The data from this study indicated that twenty-four microcomputer competencies were rated by vocational agriculture teachers as being highly important, mainly in the areas of operating microcomputer hardware and software, and using the microcomputer in the classroom. Nineteen microcomputer competencies were rated as being of average or slightly above average importance. Seven microcomputer competencies were rated as being below average in importance, primarily in the area of programming skills.

Several barriers were cited as being prohibitive factors in the use of the microcomputer. Most common usage for microcomputers in vocational agriculture were identified, as well as microcomputer systems most prevelant in Nebraska and Iowa secondary schools.

Recommendations regarding agricultural education preservice, inservice and curriculum and software development were made based on the results of the data obtained in this study.

Dillon, Roy D. (1984). A comparison of the attitudes of school superintendents, agriculture teachers, advisory council chairpersons, vocational agricultural graduates, and their employers, of the Nebraska Vocational Agriculture Core Curriculum.

The problem in this study was to assess the attitudes of five different groups toward the use of the Nebraska Vocational Agriculture Core Curriculum; namely school superintendents, vocational agriculture teachers, vocational advisory council chairpersons, vocational agriculture graduates, and their employers.

Teachers from 24 of the 77 secondary schools studied indicated they used the Core Curriculum less than 50% of the time in their instructional program, and teachers from 53 of the 77 schools indicated they used the Core Curriculum 50% or more time in their instructional program. Ten schools were randomly selected from each of two groups of schools. One-way analysis of variance tests with alpha set at .05, were calculated to determine if significant differences existed among the response groups of school superintendents, agriculture teachers, vocational

advisory council chairpersons, vocational agriculture graduates, and employers within each of the two groups of 10 schools.

Vocational agriculture teachers from both groups of schools had reviewed the Teacher Core Curriculum, superintendents had read of heard a news release, and vocational agriculture graduates had heard discussion of the Core Curriculum, superintendents had read or heard a news release, and vocational agriculture graduates had heard discussion of the Core Curriculum. There was considerable disagreement among superintedents, graduates, and employers concerning the proportion of time the Core Curriculum was used, with many respondents indicating they did not know the proportion of time the Core Curriculum was used in the local agriculture program.

In schools where the Core Curriculum was used less than 50% of the time, superinendents and agriculture teachers believed the core had a slightly positive influence on program quality, while the advisory council chairpersons, graduates, and employers saw no influence on program quality. In schools where the Core Curriculum was used 50% or more of the time, superintedents, agriculture teachers, advisory council chairpersons and graduates believed a slightly positive influence, while employers believed the core had a slightly negative influence on program quality. Superintedents and advisory council chairpersons in schools where the Nebraska Core Curriculum was used 50% or more of the time tended to believe the Core Curriculum was a little better than the local curriculum prior to the introduction of the Core Curriculum.

Advisory council chairpersons in schools where the Core Curriculum was used 50% or more of time tended to believe the advisory council had some input into the decisions concerning which units of the Core Curriculum would be included in the local vocational agriculture curriculum. The input, however, was not based on a systematic review of the Core Curriculum. Superintendents and agriculture teachers in both groups of schools believed the vocational advisory council had little input into the decisions concerning which units of the Core Curriculum should be included in the local vocational agriculture program. Superintendents and agriculture teachers from both groups of schools, and graduates of schools where the Core Curriculum was used 50% or more of the time tended to believe the Core Curriculum had a slight influence on the employment of high school graduates.

NEW YORK

Gifford, George L. (1984). The role of day part-time faculty in four selected upstate New York Public Community Colleges. Doctoral dissertation, Cornell University, Ithaca.

This study was conducted to determine the role students, day part-time faculty, full-time faculty and department chairpersons perceive day part-time faculty have within the academic and governess system of four upstate New York community colleges. A thirty question instrument was developed to measure the perceptions of the students regarding their day part-time and full-time faculty. A second instrument was developed to ascertain the perceptions of the day part-time faculty, full-time faculty, and the department chairpersons to the "actual" and "desired" role of the day part-time faculty. One hundred fifty-four students, 135 full-time faculty, 70 day part-time faculty, and 37 chairpersons were surveyed. Major findings indicate that students have more positive perceptions of both their day part-time and full-time faculty at institutions having low ratios of day part-time to full-time faculty. Further, when all of the student responses to the day part-time and full-time faculty were compared, students demonstrated a more positive perception of their full-time faculty on 15 of the 16 questions showing significant differences.

The full-time faculty and department chairpersons perceived that day part-time faculty should become more involved in the academic and professional activities of the departments, governance system, and the professional activities of the departments, governance system, and the professional development activities of the institution. The day part-time faculty agreed with these perceptions. The full-time faculty and chairpersons did not agree to the sharing of the traditional benefits of academic rank, promotions, tenure, among others. The day part-time faculty perceived they should receive these benefits.

Jennings, David Lee. (1984). A study of the public relations techniques used by teachers of agriculture at the secondary level in New York State Board of Cooperative Educational Services Centers. Masters Thesis, Cornell University, Ithaca.

The most often used and most effective methods of public relations used by agriculture programs at several Board of Cooperative Educational Services (BOCES) centers were determined. Data were gathered through a public information survey mailed to all agriculture teachers in the forty-three BOCES centers in New York State.

Findings show that teachers of agriculture rely on a variety of methods to get public relations messages to prospective students. The methods used most frequently include: informational brochures/ pamphlets, slide/tape presentations, tours of the vocational school, individual contacts with students, and special events such as club activities and open houses. Open houses and tours of the vocational school tied for the highest effectiveness rating.

Penrod, K.M. (1984). Supervised occupational experience assessed in terms of a theory of education. Doctoral dissertation. Cornell University, Ithaca.

Factors that inhibit and enhance the use of SOE in New York were identified. Factors were sorted into the categories teaching, learning, curriculum, and governance, referred to as the commonplaces of a theory of education. This theory was used as the theoretical framework for the study.

Data were gathered by sending a questionnaire to all vocational agricultural teachers in New York State. Vocational agricultural teachers (n=9), students (n=35), and administrators (n=8) from nine typical schools in central New York were interviewed. Summarized data from the survey and the interview are included in the report. The results and conclusions were reported using the commonplaces as units of analysis.

Recommendations include the need for more student-teacher interaction time regarding SOE project activities, for written task oriented SOE project plans, for in-class discussion regarding students' projects, and for specific evaluation criteria to enhance meaningful student learning as a result of SOE project participation.

Teoh, C.H. (1984). Instructional materials development for high school agriculture in the region served by the University of the South Pacific (USP). Doctoral dissertation. Cornell University, Ithaca.

This study was to investigate the existing situation concerning instructional materials for teaching high school agriculture in the region served by the USP. It specifically sought to identify from education administrators and teachers of agriculture the need for instructional materials relevant for their school systems and solicit judgements as to the best alternatives for instructional materials development in the region. The study was a verification study using the pre-experimental one-shot case study research design. Eleven administrators and 46 teachers of agriculture from eight countries in the region

constituted the sample of respondents. Field observations and personal interviews, using a structured interview schedule were conducted to gather data from the respondents. The study concluded that (i) the number of materials for teaching agriculture varied significantly and a lack of coordinated effort to utilize materials resources among the countries, (ii) materials should be developed according to the enterprise priority order of needs, (iii) materials should be developed based on desired characteristics and (iv) instructional materials developed in the region should follow the basic procedural steps identified.

Vockroth, R.W. (1984). A study of selected factors relating to persistence of adult learners in the two-year college. Doctoral dissertation. Cornell University, Ithaca.

This study investigated four personality factors which appeared to relate to persistence: locus of control, motivation, hierachy of need structure, and congruence between goals of the student and the mission of the college. A questionnaire was administered to one hundred twenty three adults at a community college, and responses were categorized as indicators of each personality factor. The number of indicators elicited was presumed related to the extent to which an individual or group was characterized by the factor under scrutiny, and the mean calculated for various groups. Results indicated that persisters are more likely than leavers to consider themselves internally-directed, to attend college in response to growth rather than deficiency needs, to have fewer concerns with unmet deficiency needs, and to sense congruence between personal goals and the mission of the college. A list of recommendations is provided by which the persistence rate might be improved.

Jewell, L. R. (1984). Mathematical Competencies Needed in Secondary Vocational Agriculture. North Carolina Department of Public Instruction. North Carolina State University, Raleigh.

Changes in technology beget adaptation in education. Ready adaptation to changes on the part of the education community often depends on changes made in vocational education programs. Mathematics has been identified as one of those generic skills areas which needs to be strengthened in the public schools. Such strengthening should imporve vocational education. It can have its most major impact, however, when the specific mathematics competencies needed for success in the training programs and in the jobs for which trained are identified and classified.

This study was designed as a prototype study to identify courses in the Agricultural Education area where success is dependent upon knowledge of a substantial amount of mathematics, to identify and classify the mathematics skills needed in two vocational agriculture course clusters, (Introduction to Agriculture and Natural Resources and Horticulture I, II, and III), to analyze the mathematics skills for transferability between occupations, to prepare prescriptions for and/or develop prescriptive training modules or units facilitating achievement in both vocational and mathematics course areas, and to develop training materials and a plan for helping others to become competent in the use of these materials.

A total of 34 vocational agriculture course competencies were identified as requiring substantial mathematical skills. With the assistance of a select panel of vocational agriculture and mathematics teachers, ten supplemental prescriptive training modules were developed to address the mathematical skills identified. The materials were disseminated through three regional workshops for lead teachers of mathematics and vocational agriculture.

Moss, J.W. (1984). An Identification of Science Competencies Taught in Vocational Agriculture Programs. North Carolina Department of Public Instruction. Raleigh, North Carolina.

The purpose of this study was to determine to what extent science competencies are currently being taught in the vocational agriculture courses in North Carolina. The Introduction to Agriculture and Natural Resources course and Ornamental Horticulture were selected for study. Science teachers and vocational agriculture teachers were asked to identify relevant science competencies implicit in these two vocational agriculture courses.

Survey instruments to identify relevant science competency

goals and performance indicators for agriculture were developed and sent to a panel of science and vocational agriculture teachers. With their input a list was prepared of science competencies and performance indicators implicit for vocational agriculture.

A handbook was developed as one of the products of this research. Section 1 of the handbook reported the findings of the research procedures. Section 2 contained explanations of ways vocational agriculture and science teachers could improve instruction to facilitate the learning of science competencies in vocational agriculture. The information in this section stressed practical ways of helping students learn science in agriculture. The third section of the handbook was devoted to a listing of resources available to vocational agriculture teachers to help students learn science competencies. An annotated bibliography of exemplary materials was prepared with information on how teachers can obtain the material.

NORTH DAKOTA

Fegert, W.R. (1984). Problems of first year vocational agriculture teachers in North Dakota, South Dakota, Montana and Minnesota. Master of Science colloquium paper. North Dakota State University, Fargo.

The major purpose of this study was to determine the extent to which problems interfered with the teaching of first year vocational agriculture teachers in North Dakota, South Dakota, Montana and Minnesota. Specific objectives of the study were: 1) to determine the extent to which first year vocational agriculture teachers perceive selected problem areas as interfering with conducting effective teaching problems 2) to determine the extent to which first year vocational agriculture teachers perceive specific problems as interfering with conducting effective teaching programs 3) to compare the results of the study with a similar study conducted by Lutovsky in 1972.

The questionnaire used by Lutovsky (1972) was modified slightly and used to obtain data from 44 first year vocational agriculture teachers. Data were tabulated and mean scores were calculated for each problem and problem area.

Conclusions drawn from this study were: 1) the most serious teaching problems for first year vocational agriculture teachers in North Dakota, South Dakota, Montana and Minnesota were concerned with time management, student motivation and supervised occupational experience programs 2) the problem areas that interfered most with teaching of first year vocational agriculture teachers in North Dakota, South Dakota, Montana and Minnesota were supervised occupational experience programs and the FFA 3) first year vocational agricultural teachers in North Dakota, South Dakota, Montana and Minnesota perceived most of the selected problems to be of little to moderate influence in interfering with their teaching 4) most of the selected teaching problems and problem areas were rated as less serious by the 1983 group than by the 1972 group with few exceptions.

Franzen, R.J. (1984). Attitudes of North Dakota vocational agriculture instructors toward supervised occupational experience programs in vocational agriculture. Master of Science colloquium paper. North Dakota State University, Fargo.

The major purpose of the study was to determine the levels of agreement with selected educational concepts and to determine selected practices in supervised occupational experience programs being conducted by North Dakota vocational agriculture instructors in secondary schools.

Instructors responded to seventeen selected concept statements concerning supervised occupational experience programs. Ten of these statements were rated in the agree to strongly agree range and seven in the agree to undecided range. Comparison of levels of agreement between administrators and instructors revealed that there was a significant difference at the .01 level for twelve of the seventeen statements. Administrators were at a higher level of agreement for only two of these twelve concepts. North Dakota school administrators gave stronger support than did vocational agriculture instructors to concepts regarding a minimum number of supervisory visits and the keeping of program records by the instructor. A number of selected practices were presented to determine which practices instructors were carrying out. Data indicated that instruction for the supervised occupational experience program is provided primarily at the freshman level, most instructors offer no extra credit for SOE programs, the majority of instructors carried out five of the twelve selected practices, and that newspaper articles, proficiency awards and banquet recognition were the most popular ways of publicizing students who have outstanding SOE programs.

Huapalla, H.A. (1984). Task performance and perceived training needs of North Dakota 4-H ambassadors. Master of Science colloquium paper. North Dakota State University, Fargo.

The purpose of this study was to identify leadership tasks which North Dakota 4-H ambassadors felt appropriate for them to perform and to determine their ability to perform those tasks.

The population of the study was the seventy-three North Dakota 4-H ambassadors. All of them constituted the sample. A questionnaire was developed and sent to each 4-H ambassador Sixty-six or 90.41 percent of the questionnaires were returned. Sixty-five or 89.04 percent were usable. Frequencies, percentages, and averages were determined in analyzing the data.

The findings consisted of 1) the North Dakota 4-H ambassadors are mostly rural youth consisting of two-thirds female; college students with seven or more years of experience as a 4-H member; and four or less years as a 4-H ambassador 2) a majority of 4-H ambassador respondents felt the 65 give leadership tasks were appropriate for them to perform. Sex of respondents did not have noticeable influence in their responses 3) only organizational, project leadership and planning related tasks were performed by a majority of responding ambassadors even though they said that most of the 65 leadership tasks were appropriate for them to perform. Self-improvement and 4-H promotional tasks were performed by about one-third of the respondents. Sex of ambassador respondents did not have noticable influence on their responses though females performed

slightly more organizational and project leadership tasks than males 4) a majority of the responding 4-H ambassadors reported as being well prepared to perform half of the sixty-five given leadership tasks. Organizational, project leadership, and planning related tasks were those in which a majority of the respondents felt well prepared, while only a few of them felt well prepared in self-improvement and 4-H promotional tasks. Females reported as being slightly better prepared than males.

Schumacher, L.G. (1984). North Dakota agribusiness employment opportunities and training needs within eight selected agribusiness industries. Master of Science colloquium paper. North Dakota State University, Fargo.

The purpose of the study was to determine employment opportunities within eight selected agribusiness industries. Specific objectives were to determine 1) agricultural employment opportunities, 2) the level of training needed to gain job entry, 3) the amount of experience preferred for occupational positions and 4) future employment and trends within eight selected agribusiness industries.

Direct mail questionnaires were developed and mailed to the implement, grain, dairy processing, veterinarian, meat processing, horticultural, agricultrual finance and livestock marketing related businesses. Two follow-up mailings were used to improve the response rate. Watts-line telephone calls were placed to clarify data and improve the response rate.

Specific occupations were identified within the eight selected agribusiness industries. Agribusiness managers identified the preferred years of training and experience necessary to gain job entry. Projections of employment opportunities were made for a six year period and replacement needs were estimated.

Projected full-time employment opportunities were very stable, with a slight decline anticipated in most of the selected agribusiness industries. The meat processing and agricultural finance businesses were anticipating a slight increase in full-time employment opportunities. The average number of employees per business was expected to increase slightly during the next six years. Adverse economic conditions at the time of the survey may have affected employers' responses for anticipated total employment opportunities. Employers' expectations for perferred levels of training and preferred years of experience varied considerably within selected occupational positions.

Torgerson, K.L. (1984). Expectations of North Dakota farmers enrolled in adult farm management education programs. Master

of Science colloquium paper. North Dakota State University, Fargo.

The primary purpose of this research was to identify expectations of farmers enrolled in the adult farm management education programs in North Dakota towards selected farm management program activities. Specific objectives included determining: the expectations of the farmer; differences between groups according to length of enrollment and their willingness to participate in selected activities.

The study population included farmers who were enrolled in adult farm management education programs in North Dakota in 1982 and who had completed a farm business analysis for that year. Those participating included 323 clients in 13 adult farm management programs. A questionnaire was developed, pilot tested and mailed to the clients. The response rate was 78.3 per cent with 252 surveys returned.

The farmers were divided by number of years in the program. Those in the program one to five years made up one group and those in the program six years or more made up the other group. Expectations of the two groups were compared.

More than one-fourth of those enrolled had at least a baccalaurate degree with 73% having at least some college. Direct contact by the instructor was the most frequently mentioned method of finding out about the program.

Sixteen of the 22 factors were rated at the level of some importance or higher with highest rated item, assistance in keeping records, receiving a mean score of 4.79 on a scale with 5 indicating very important. The most highly rated were concerned with records, analysis, credit planning and financial management. Items dealing with other aspects of technical agriculture were generally rated lower.

The two tenure groups tended to agree in their ratings. Statistically significant differences were found for only 4 of the 22 items and in these cases the factors were rated higher by those who had been enrolled in the program longer.

Barrick, R. K. (1984). Perceptions of the duties and responsibilities of local vocational education supervisors. OSU Small Research Grant Study, The Ohio State University, Columbus.

Random samples of 150 local vocational education supervisors and 150 local vocational teachers plus all city and JVS superintendents (n=100) and state-level vocational supervisors (n=40) were surveyed. The purposes of the study were to obtain perceptions of the current and expected roles of local vocational education supervisors in Ohio and to determine differences in perceptions among the four groups. Respondents indicated the degree to which they agreed that each of the 47 duties is or should be a part of the role of local supervisors on a scale of six (strongly agree) to one (strongly disagree).

Respondents indicated their disagreement with eight of the 47 items (mean < 3.5) as being the current role of supervisors. Nine of the 47 items were indicated "disagree" (mean <3.5) for the expected role of local supervisors. Differences existed between perceptions of the current and expected roles. There was a significant difference ($p \leq .01$) between current and expected roles for eight of the 47 duties.

For current role, the four groups differed significantly ($p \leq .01$) on their perceptions of 18 of the 47 topics. The groups differed significantly on 18 of the 47 topics regarding the expected role of local vocational education supervisors.

Barrick, R. K., and Caplinger, C. L. (1984). Community development instruction in vocational agriculture. (R. J. Reynolds Industries, Inc., funded project), The Ohio State University, Columbus.

A random sample of 108 Ohio high school vocational agriculture instructors was surveyed to obtain their perceptions of community development instruction in vocational agriculture. Respondents indicated their perceptions of what community development topics should be taught, at what grade level are they and should they be taught and how community development topics are incorporated into the vocational agriculture curriculum.

Respondents indicated, generally, that community development topics should be taught at all levels of the high school vocational agriculture curriculum, with four of the 11 topics taught at the ninth grade, three at the tenth or eleventh grade and four at the eleventh or twelfth grade. Respondents reported that currently seven of the 11 topics are taught at the eleventh and twelfth grades.

In regard to incorporating community development topics into the curriculum, respondents favored tying eight community development topics into a leadership development unit. Seven topics could

be taught as a separate unit. Only one topic should be taught as a part of a technical agriculture unit. Currently, most community development instruction is a part of a leadership development unit. Over 30% of the respondents indicated that eight of the 11 topics are not currently taught.

Beckley, W. E. (1983). Results of the Ohio Cooperative Extension Service needs assessment for community and natural resource development programs. Master of Science thesis, The Ohio State University, Columbus.

The study was undertaken in order to assess the needs of Ohio community and natural resource development extension information users. Data were collected with a committee designed instrument. Usable instruments were returned from 2,313 individuals, 52.5 percent of the 4400 mailed out. The aspects of community and natural resource development which received the highest priority rankings were: (1) providing soil and water conservation information; (2) providing programs related to farm and home safety; (3) providing personal and home security information; (4) providing farm crime prevention information; and (5) providing to communities information on analyzing economic development incentives.

Behm, K. S. (1984). The effect of a litter education program on attitudes and behavior of second and fourth graders in a selected Ohio school system. Ph.D. dissertation, The Ohio State University, Columbus.

Evaluation is an important component of extension programming. Agents need methods that will provide useable data with the limited resources available. The goal of many 4-H programs is to teach children attitudes today that will affect behavior sometime in the future. However, there is much disagreement among psychologists about the relationship between attitudes and behavior.

The Ohio Cooperative Extension Service developed and conducted a litter education program under a grant from the Ohio Department of Natural Resources Office of Litter Control. This study looked at the affects of treatment and the grade level at which they received the treatment on attitudes toward littering and littering behavior. Forty-seven second and 64 fourth graders from one school made up the treatment group. Fifty second and 39 fourth graders in a neighboring school served as the control group. The treatment and control schools were matched by size of school, geographic area, and socioeconomic background of their students. Qualitative data was collected as a pretest to determine equivalency between the two

groups. Students were given cookies on a paper plate and a napkin and observed in the classroom to determine their littering behaviors in the pretest.

A set of slides depicting a variety of potential littering situations was used to measure attitudes toward littering. Students were asked to respond YES, NO, or I DON'T KNOW when asked whether a suggested behavior was appropriate. Behavior was determined by responses to series of behaviors that students may or may not have done. A two-by-two factorial design was used with amount of treatment and grade level being the two factors. There were two levels of each factor: Treatment and control, and grades two and four. Two-way ANOVA was used to analyze the data.

There was significant difference at the .001 level between the attitude scores of the treatment and control groups indicating that the litter education program was effective. There was no significant difference between grades. There was a potential interaction effect with a probability of .057 indicating that the program may be more effective in the fourth grade. Neither treatment nor grade level produced a significant effect on the behavior scores.

Caplinger, C. L. (1984). Factors related to reenrollment in 4-H of eight-through-twelve-year-old members. Master of Science thesis, The Ohio State University, Columbus.

The purpose of this study was to identify factors which are related to the reenrollment of 4-H members in 1983. Eight-through twelve-year-old reenrollees were compared to non-reenrollees in the same age group to determine if relationships existed between selected factors and their reenrollment status.

Substantial relationships were identified between two characteristics and reenrollment. These were the years of club membership and planned membership in 4-H in the subsequent year of 1984. Seven factors showed a moderate relationship with reenrollment. These were earning money from 4-H projects, liking project work, 1983 enrollment of siblings, parents' attendance at club meetings, participation in county fair, member's attendance at club meetings, and desire to be a Junior Leader. The remaining characteristics investigated had a low or negligible relationship with 4-H reenrollment.

Etuk, L. A. (1984). Commitment to teaching as a profession by Ohio teachers of vocational agriculture. Ph.D. dissertation, The Ohio State University, Columbus.

The researcher looked for the major factors related to commitment to teaching as a profession by Ohio teachers of vocational

agriculture. It was hypothesized that certain demographic characteristics, job characteristics and work experience would relate to commitment to teaching as a profession by Ohio teachers of vocational agriculture; this formed a conceptual framework for the study.

The respondents were 112 randomly selected vocational agriculture teachers. The data were collected by mail questionnaires and telephone interviews.

From the Pearson product moment correlation analysis, it was found that none of the demographic characteristic variables demonstrated either a substantial or a very strong relationship with the dependent variable: commitment to teaching as a profession. However, the following demonstrates low relationships with the dependent variable: age, being married and teaching farm management. Teaching mechanics demonstrated a low negative relationship with the dependent variable. There was a moderate positive relationship between commitment to teaching as a profession and feedback. Credit for work, skill variety, job autonomy and shared responsibility were not related to the dependent variable. Most of the work experience variables did have a significant relationship with the dependent variable: vocational agriculture teacher cohesion, group attitudes toward the teaching profession of vocational agriculture, realization of expectations, first-year job challenge, personal importance and self image. Profession work and individual actions demonstrated low relationships with the dependent variable.

Semi-partial multiple correlation coefficients were used to discover that job characteristic variables as a set failed to explain a significant unique proportion of the variance in the dependent variable. However, the collective set of work experience variables explained a significant unique proportion of variance in the dependent variable.

From the stepwise multiple regression analysis, personal importance, first-year job challenge, vocational agriculture teachers' cohesion and self image were found to be the best predictors of commitment to teaching as a profession by Ohio teachers of vocational agriculture.

Falakdine, D. (1984). Mathematical problem-solving skills of high school vocational agriculture students. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of the study was to investigate the mathematical problem-solving skills pertaining to agricultural mechanics that should be taught vocational agricultural students in secondary schools and to describe the mathematical problem-solving ability of high school vocational agriculture students. Also investigated were relationships between the mathematical problem-solving ability of students and selected variables.

Randomly selected samples were obtained from populations of vocational agriculture teachers who were teaching in 1982-83 and the junior and senior students enrolled in vocational agriculture. Data collection was by mail questionnaires. Experts in agricultural mechanics instruction were asked to verify a list of mathematical problems in agricultural mechanics that vocational agriculture students should be able to solve. Teachers were asked to indicate whether they teach the mathematical problem-solving skills, the grade level at which the problems were taught, and the level of achievement they expect their students to achieve. Students completed a 20-item mathematical problem-solving test.

The following conclusions were made: (1) experts in agricultural mechanics instruction agree that vocational agriculture teachers should teach mathematical problem-solving skills that include one-step and multi-step problems involving operations with whole numbers, decimals or fractions, or a combination of whole numbers and decimals or fractions; (2) a majority of the teachers reported they teach problem-solving skills, however, all vocational agriculture teachers do not emphasize the teaching of mathematical problem-solving skills; (3) teachers provide some instruction in mathematical problem-solving at grade 9 with more instruction at grades 10, 11, and 12; (4) for two-thirds of the mathematical problems, teachers estimate that less than 75 percent of the students could solve the problems. Teachers estimate that a lower percentage of the students can solve multi-step problems than one-step problems; (5) vocational agriculture students do not achieve a high level of competency in solving mathematical problems. On the 20-item test scores ranged from 0 to 19 with a mean score of 11. Students are more successful in solving one-step problems than multi-step problems; (6) there are moderate positive relationsnips between scores on the test and number of mathematics courses completed and academic rank in school. Males and females achieved comparable scores; seniors achieved higher scores than juniors; (7) vocational agriculture teachers do not estimate correctly their students' level of competence to solve problems. More frequently than not, teachers overestimate students' level of achievement.

Fix, M. L. (1983). The Ohio 4-H dairy goat program as perceived by 1982 4-H members. Master of Science thesis, The Ohio State University, Columbus.

The purpose of the study was to gather background data on Ohio 4-H members that had dairy goat projects in 1982 and to determine their interests in selected dairy goat management topics. There were 14 attribute variables identified. Needs were assessed by the ranking in importance of 28 topics relating to dairy goat management.

Topics were categorized into seven areas.

The population studied was all 4-H members in Ohio that had a dairy goat project in 1982. The sample consisted of 91 (72 percent response) youth randomly selected from 30 counties throughout the state.

Of the attribute variables identified, the four main characteristics of interest were age, sex, place of residence and years in 4-H. The average respondent was female, nearly 14 years old, lived on a farm and had been in 4-H for four years. From the 28 topics considered, disease control and showmanship techniques were considered most important. Three of the top six topics were in the area of showing. The topics area relating to showing goats was most important, followed by animal differences and health.

There were no significant differences between respondents and a follow-up sample of non-respondents. There were negligible correlations between the four main attribute variables and the importance of the seven topic areas.

Although respondents indicated the most interest in topics related to showing, a recommendation was made to stress subject matter from all areas of management. Consistancy with extension and 4-H philosophy will be maintained by stressing a varie of topics.

Hedges, L. E. (1984). Perceptions of the competencies of supervising teacher educators as held by new and returning Ohio teachers of vocational agriculture. Staff study, The Ohio State University, Columbus.

The purpose of this study was to determine the effectiveness of the supervising teacher educators as perceived by new and returning teachers of vocational agriculture in Ohio who participated in the inservice education program offered by the Department of Agricultural Education at The Ohio State University. Recommendations were formulated to assist teacher educators in improving their competencies in providing inservice education for new teachers of vocational agriculture.

The population of this study included those Ohio teachers of vocational agriculture who had begun teaching in 1980, 1981, and 1982 and who were still employed as teachers (N=93). Data were collected through the use of a mail questionnaire. The participants in the study were provided with 33 characteristics or competencies of supervising teacher educators and requested to indicate their level of agreement or disagreement with each one. Descriptive statistics were used to summarize, organize, simplify and to help interpret the data.

The study indicates that the Ohio supervising teacher educators

are performing at a satisfactory level of competence in a majority of the 33 specific job responsibilities when supervising beginning teachers of vocational agriculture. The study also indicates that supervising teacher educators should improve their practices in several competency areas: (1) during the visit to the new or returning teacher, accompany the teacher on a supervised occupational experience visit, (2) provide more assistance in assessing the condition of and providing maintenance for equipment and instructional materials, and (3) make more frequent visits to observe the classroom teaching of the new or returning teacher.

Igodan, O. C. (1984). Factors associated with burnout among extension agents in the Ohio Cooperative Extension Service. Ph.D. dissertation, The Ohio State University, Columbus.

The objective of the study was to: (1) determine the level of burnout among extension agents in the Ohio Cooperative Extension Service; (2) determine whether there are differences in the level of burnout among extension agents in agriculture, home economics and 4-H; and (3) determine the extent to which burnout is associated with personal, organizational and job (environmental) factors.

A four part questionnaire measuring burnout, job (environmental) factors, job satisfaction and work overload was mailed to 101 randomly selected agents in five districts in Ohio. An 89 percent response rate was obtained. Spearman correlation coefficients and the Pearson product moment correlation coefficients were used to describe relationships between personal factors, organizational factors, job (environmental) factors and burnout. A one-way analysis of variance including an LSD post hoc analysis, a t-test and the stepwise multiple regression analysis was applied to test the differences between the groups of agents at the .05 level.

The results of the findings reveal a low level of burnout among agents in the Ohio Cooperative Extension Service. The data also reveal that 4-H agents experience higher levels of burnout than economics and agriculture agents. Also, younger agents were found to experience higher levels of burnout than older agents. The levels of burnout experienced by male agents were the same as those experienced by male agents were the same as those experienced by female agents.

Low to moderate negative relationship was found between age, marital status and burnout. Also, negligible to low relationship was found between sex and burnout (EE:F, r = .09; EE:I, r = 17; DP:F, r = -.09; DP:I, r = -.08.

Negligible to moderate negative relationship was found between job (environmental) factors and burnout, while a negligible to

substantial negative relationship was found between organizational factors and burnout. Job satisfaction was identified through the stepwise regression analysis to be the best single predictor of burnout.

As a result of the analysis of data obtained through this study, the following conclusions were drawn: the majority of agents in the Ohio Cooperative Extension Service are not experiencing alarming levels of burnout. However, a significant minority experience high levels of burnout which demand attention. The 4-H agents as a group needed the most attention. As job satisfaction increases, the levels of burnout decreases.

Ilkiuyoni, J. A. (1984). Professional competencies needed by agricultural teachers in postsecondary technical institutes in Tanzania. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of this study was to ascertain professional education competencies needed by agriculture teachers in two-year technical institutes in Tanzania. Three scores on each of the 88 competencies were collected from 124 respondents. The three scores were on (1) level of importance; (2) level of knowledge; (3) level of application. One hundred and nineteen teachers and five principals were the respondents from five randomly selected agriculture institutes in Tanzania in the survey done in April-May 1984.

Data for each competency were calculated in terms of level of importance, knowledge, and application for all respondents. Using the Borich model formulas, weighted knowledge and application scores were calculated and ranked from high to low. The weighted knowledge scores and weighted application scores represented classroom instruction and field experience needed by respondents. The two groups of respondents were compared in their rankings of the weighted scores.

Teachers were grouped according to position, levels of education, program areas and marital status, and were compared in their rankings of the weighted scores. Selected demographic characteristics of the teachers were correlated with the weighted scores.

The findings showed that all the competencies were rated high to very high in importance to the job function by all respondents. At the same time, both groups rated themselves rather low on knowledge and application competence.

The findings also revealed that there were significant differences among rankings by both groups in terms of weighted knowledge and application scores.

Teachers rated 49 knowledge competencies and 14 application competencies below average on a six-point Likert-type scale. The relationship between selected demographic characteristics of the

teachers and the weighted knowledge and application scores were mostly low or negligible.

The findings indicated that the relationship between importance and knowledge, application, and the weighted knowledge and application scores were significant and moderate.

The study identified competencies needed in terms of classroom (knowledge) instruction and field (application) experience that can be used as a basis for establishing an inservice teacher training program in Tanzania.

Knight, J. A. (1984). A content analysis of the Agricultural Education Magazine 1929-1984. Staff study, The Ohio State University, Columbus.

The purpose of this study was to do a content analysis of the Agricultural Education Magazine from its beginning in January 1929 through December of 1983. To direct this effort, answers were sought to the following questions: (1) What has been the nature of the contents of the articles which have been published in the Agricultural Education Magazine from January 1929 through December 1983? (2) Who have been the leading contributors to the Agricultural Education Magazine and what has been their professional role? (3) What has been the internal structure of the Agricultural Education Magazine and how has it changed over time? (4) What have been the major historical events of the Agricultural Education Magazine?

This was a descriptive study using content analysis as the technique to gather data and make appropriate descriptions. All items in the Agricultural Education Magazine from January 1929 through December 1983 served as the source of data. Two systems were developed for gathering the appropriate data. One was used in grouping the content by specific categories and the other was used to gather data regarding author contributions. Notes were taken regarding specific editorial changes, size, color, format, and other items related to the magazine and its development.

(1) Almost 2/3 of the articles in the magazine have been aimed directly at teachers of vocational agriculture. (2) More articles have been published in the magazine about FFA than any other single subject. (3) Teacher educators have had the major role in the editorial work of the magazine. (4) While there have been some changes in the structure of the magazine, it has remained relatively unchanged for the past 30 years. (5) The editorial style of the magazine can essentially be divided into two groups. From 1929 to 1950 special editors for topic areas were the rule and from 1950 to the present, regional editors with theme issues have been utilized. (6) During the first decade the magazine tended to have more items that were shorter in length. From the 1940's until the present, the

general number of items have been relatively constant. (7) Generally summer programs have been written about in only a limited fashion. (8) More articles for the magazine have been authored by teachers of vocational agriculture than any other group. (9) When considering all aspects of the magazine, teacher educators have been the most productive contributors as a group. (10) Several trends identified in this study which relate to such topics as summer programs, authorship of articles and orientation of article content merit further study.

Matulis, J. K. (1984). Perceptions of 4-H alumni from four Ohio counties concerning the impact of 4-H on their career development. Master of Science thesis, The Ohio State University, Columbus.

This study identified the perceptions of 4-H alumni from four Ohio counties concerning the impact of 4-H on their career development, as well as the current education/occupational characteristics and the 4-H involvement characteristics of these individuals. Relationships among the perceptual variables and the two types of characteristic variables also were examined. Alumni felt that 4-H had much impact on their self-awareness, particularly concerning positive interests and abilities. Four-H tended to have much impact upon the development of general work competencies reflecting humanizing skills and good work habits. However, 4-H had very little impact in the development of specific work competencies, those job-seeking skills related to interviews, applications, and resumes. Alumni perceived 4-H as having some impact upon their career awareness, exploration and selection; greatest impact was attributed to 4-H in general career awareness concerning recognition of interests and abilities as leading to a career, knowledge of career exploration resources, career considerations, and sense of need to make a career choice. Less impact was ascribed to 4-H relative to more specific areas such as discovering career obstacles and acquiring career information. However, 4-H was least influential in alumni career planning through county 4-H agents, 4-H leaders, and other 4-H members. As the number of 4-H career education activities or projects in which the alumni were involved increased, the perceived impact of 4-H on work competency development and career awareness, exploration and selection tended to increase. The more active the alumni perceived themselves as 4-H members, the greater the perceived impact of 4-H on work competency development tended to be.

McCracken, J. D., Beard, E. and Barrick, R. K. (1984). Educational and occupational aspirations of vocational agriculture students from full-time farms, part-time farms and non-farm residences.

Staff study, The Ohio State University, Columbus.

Students in vocational agriculture are not all sons and daughters of full-time farmers. There is a trend towards more highly efficient full-time farms, more part-time farms and fewer mid-size farms. These changes are having an impact upon the nature of students enrolling in vocational agriculture classes. A greater percentage of students than in the past are from families who farm only part-time or not-at-all. Students may enroll in vocational agriculture for various reasons. What is the influence of their occupational goals, or their educational plans? The data gathered in this study were used to gain an understanding of the current situation and to serve as a basis for changing the vocational agriculture program to reflect more nearly the current and projected needs.

The major purpose of this study was to describe the nature of the students enrolled in vocational agriculture in terms of: their family farm situation, occupational goals, reasons for enrolling, plans following graduation, and supervised occupational experience (SOE) programs. Also relationships between the family farm situation and other variables were explored.

Data were collected in vocational agriculture classes using an instrument developed for the study. Responses were collected from 255 students from five schools.

Of the 255 students, 36% were not from farms, 41% were from part-time farms, and 23% were from full-time farms.

The three groups of respondents differed in their occupational goals. Children of full-time farmers were more interested than the other groups in the goals of: to be engaged in full-time farming, and to be employed as a farm manager. Children of part-time farmers were more interested than the other groups in the goals of: to raise a few head of livestock for pleasure, to raise crops in the family garden, to be employed in an agricultural service, to be employed in veterinary medicine, to be involved in agricultural research, and to be employed in agricultural communications. Children of non-farmers were more interested than the other groups in the goals of: to work in wildlife protection/conservation, to work in forestry service/management, and to be employed in a non-agricultural occupation/career.

Children of full-time farmers were more likely to pursue an agricultural career option after high school. Percentages planning on pursuing an agricultural career option were 67.8 for children of full-time farmers, 49.1 for children of part-time farmers, and 27.2 for children from non-farm families. For the entire group, employment in an agricultural business was the least desired option (5.5%).

No differences were observed between male and female students

in the proportion from full-time farms, part-time farms and who were not from farms. Also, there were no differences by sex in occupational goals, reason for enrolling, or plans following graduation.

Supervised occupational experience program scope was measured through use of the Productive Man Work Unit (PMWU). A PMWU is the amount of work one can be expected to accomplish in a 10-hour day. Standard PMWU scores were assigned to each type and scope of project. Children of full-time farmers achieved mean PMWU scores of 33.0; children of part-time farmers achieved mean scores of 7.3; and children of non-farmers achieved mean scores of 5.0.

Potter, O. B. (1984). Supervised occupational experience programs and achievement of students mainstreamed in Ohio vocational agriculture programs. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of this research was to examine the [illegible]e and scope of supervised occupational experience programs (SOEP) and the achievement of students mainstreamed in vocational agriculture in Ohio. This study was designed to determine the proportion of variance in student achievement which could be explained by the major independent variables. Furthermore, this study was to determine those variables which best predict student achievement.

An instrument was mailed to eighty-two randomly-selected vocational agriculture teachers to be administered to their 300 mainstreamed students. Data gathered from respondents and a sample of non-respondents yielded a final response rate of 72.7%.

The Pearson Product Moment Correlation was used to describe the relationship between the variables. Semi-partial correlation coefficients were obtained to indicate the unique proportion of the variance explained by each variable and each variable set. Multiple regression statistics were used to predict variable scores. Ten teachers and 30 students were interviewed by being asked questions related to the research variables.

The findings of this study indicated that the following variables were related to student achievement: being multiply handicapped ($r = .18$), FFA participation ($r = .35$), FFA offices held ($r = .30$), FFA awards ($r = .27$), FFA field trips ($r = .19$), in-school laboratory project scope ($r = .19$), total SOEP scope ($r = .15$), being a nonfarm rural resident ($r = -.13$), being a city or town resident ($r = .19$), living with one parent ($r = .13$), living with a guardian ($r = .12$), receiving money from parents ($r = .13$), receiving encouragement from parents ($r = .24$), participating in a reduced price or free lunch program ($r = .16$), and the occupational status of the students' parents ($r = .24$).

A semi-partial multiple regression coefficient was calculated (R^2 = .49). The following variables accounted for a unique significant proportion of variance in the dependent variable (student achievement): FFA participation, FFA offices, FFA awards, in-school laboratory projects scope, money, encouragement, lunch, and occupational status.

The best predictors of student achievement in the stepwise regression equation (R^2 = .29) listed in their order of entry, are: FFA participation, number of FFA offices held, number of FFA awards received, occupational status of parents, and money students received from parents.

Based on qualitative data, vocational agriculture teachers felt their presence at IEP meetings could benefit them in their efforts to better understand the mainstreaming process as well as the educational needs of exceptional students.

Potts, B. C. (1984). An evaluation of the performance appraisal system used by the Ohio Cooperative Extension Service. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of the study was to evaluate the Ohio Cooperative Extension Service's Performance Appraisal System which is composed of three elements: the Performance Against Standards test; a Key Objectives Score obtained from a Management by Objectives component; and a Counseling Interview. The population of interest was all Ohio agents (n = 274) whose job performance was assessed through the system in 1982.

Data from the 1982 OCES performance appraisal was used to study the psychometric quality of PAS ratings. Means, standard deviations, minimum and maximum scores were computed to determine the presence of leniency, severity, central tendency and range restriction errors. A forced choice instrument was developed using 52 items from the PAS to determine the presence of halo in the ratings. The effects of the specified rate attribute variables were studied using the 1982 data and analysis of variance. A short form of the PAS using 46 items from the 1982 version was used to determine the feasibility and appropriateness of a shorter test. A Spearman's Rank-order correlation coefficient was computed to determine the extent of agreement between rankings. A questionnaire was sent to a forty percent sample of agents to determine their perceptions of the performance appraisal system. Frequencies and percentages were computed. Supervisors were interviewed for their perceptions of the system.

Results indicate the presence of leniency, severity, range restriction and halo errors. The variable, extension area, which determines the supervisor who does the rating significantly affected the variance of agents' scores. The short form of the PAS was found

to be acceptable alternative to the longer version. Supervisors' and agents' perceptions were similar in that both believed the PAS needed to be revised but different in that agents and supervisors disagreed on many other aspects and did not show evidence of communicating effectively with each other.

Ritsos, P. (1984). Professional competencies needed by extension employees in urban counties of Ohio. Master of Science thesis, The Ohio State University, Columbus.

A census was conducted to: (a) describe the demographic characteristics of extension employees in the eight counties identified by the Ohio Cooperative Extension Service as urban in terms of their: sex, age, position held presently, tenure in Extension, tenure in present position, area of major responsibility, highest academic degree held and field of study in which highest academic degree was obtained, (b) describe the extension employees' perceptions of the competencies needed in organizational, communication and research and evaluation skills, and (c) determine the relationship between the demographic characteristics of extension employees and their perceptions of competencies needed in organizational, communication and research and evaluation skills. The extension employees surveyed were those included in the Ohio County Extension Agents list in 1983. Forty-six extension employees in the eight urban counties of Ohio, were surveyed with a 78 item questionnaire of established validity and reliability. Extension employees rank-ordered the competency categories and subcategories as follows: 1. Organizational skills: (a) program planning and development, (b) maintain professionalism, (c) extension organization and administration and (d) program execution. 2. Communication skills: (a) social factors, (b) effective thinking and (c) public relations. 3. Research and evaluation. There were not any perfect, very high or substantial correlations between the competency categories and subcategories and the demographic characteristics of the extension employees. Moderate correlations were found between: (a) position in the Cooperative Extension Service and the category program planning and development, (b) tenure in the Cooperative Extension Service, tenure in present position, major field of study with the subcategory effective thinking, and (c) highest academic degree held with the category communication skills and the subcategory public relations. All other correlations were either low or negligible.

Short, G. E. (1984). Attitudes of Ohio vocational agriculture teachers toward summer programs. Master of Science thesis, The Ohio State University, Columbus.

The objectives of this study were: (1) to determine the attitudes of Ohio vocational agriculture teachers toward summer programs in vocational agriculture, and (2) to determine any differences or relationships existing among these attitudes and the following characteristics: length of extended service, taxonomy area, years of experience teaching vocational agriculture, educational level of the teachers, additional summer employment other than teaching, and teacher perceptions of the attitudes of their administrators toward summer programs.

Data were collected through the use of a researcher-developed, valid and reliable instrument.

The attitudes of the teachers and the perceived attitudes of the administrators were positive toward summer programs. Significantly lower attitudes were found in the taxonomy areas of Agricultural Industrial Equipment and Services, Animal Production and Care, and Agricultural Products Processing. Teachers perceived administrators as having significantly lower attitudes toward summer programs when the teacher had summer employment in addition to teaching. Significant differences were not found between teacher attitudes toward summer programs and the following characteristics: length of extended service, years of experience teaching vocational agriculture, educational level of the teacher, and perceived attitudes of administrators toward summer programs.

Stringfellow, W.A. (1983). Measuring selected demographics of the 1983 Ohio state fair patrons. Master of Science thesis, The Ohio State University, Columbus.

A study was initiated to obtain information regarding the opinions, interests, and characteristics of persons attending the 1983 Ohio state fair. These objectives will be accomplished by interviews being conducted every ten minutes as patrons left the 1983 Ohio state fair to determine their opinions, interests and characteristics.

Functions which were considered appropriate were: (1) most of the attendees felt the 1983 Ohio state fair was better than previous fairs; (2) they were interested in the midway, agricultural and livestock events and grandstand concerts respectively; (3) the typical 1983 Ohio state fair attendees were white males, averaging age of 33 and attended the fair with family members. They remained at the fair from five to six hours and spent an average of 27 dollars beyond the admission price.

Generally, the 1983 Ohio state fair was well received by its patrons.

Wardlow, G. W. (1984). The academic ability of agricultural education graduates compared with other agriculture, education and university graduates of The Ohio State University. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of this study was to describe graduates of agricultural education on measures of academic ability and performance relative to other university populations. The study was descriptive survey research of a comparative nature.

The study included four target populations: agricultural education graduates, other agriculture graduates, secondary education graduates, and all university graduates. Each of these populations included graduates of The Ohio State University for the time period of Summer 1978 to Spring 1983. Random samples were drawn for the agricultural education, other agriculture, and education graduates. The data for those samples were obtained from the records of each subject maintained in the records offices of The Ohio State University. Data for the university population were obtained in the form of population statistics.

Two-thirds of the agricultural education graduates were males. They held a mean cumulative grade point average of 2.81 upon graduation from college. They ranked at the seventy-eighth percentile of their high school classes in which they earned a grade point average of 3.20. They held ACT scores of 18.7 on the English portion, 22.0 on the math portion, and a composite score of 21.3. They earned a 2.76 mean grade point average in agriculture courses.

A significant difference existed between the groups on the characteristic of sex. The mean grade point average held by agricultural education graduates was lower than that held by education graduates, but no different than that held by other agriculture or university graduates. Agricultural education graduates were no different than the other groups studied on high school percentile rank, high school grade average, or ACT math and composite scores. Agricultural education graduates scored lower than university graduates on the ACT English exam, but no different than other agriculture or education graduates.

Agricultural education graduates who held agricultural education as a first major were no different than those who held it as a second major on each of the characteristics, except grade in student teaching. Second majors earned higher grades in student teaching than first majors. A higher proportion of male agricultural education graduates entered the teaching profession than female graduates.

Bryan, K.R. (1983). Member and leader involvement and attitudes toward existing and possible new 4-H activities in Creek County. Masters Thesis. Oklahoma State University, Stillwater.

This study assessed the involvement and attitudes of members and leaders towards existing and possible new activities in Creek County. Two structured questionnaires were developed, one for leaders and one for 4-H members. Twenty-one leaders, 123 junior members and 73 senior members were included in the study. The questionnaires asked five questions for each of 13 different activities which are currently part of the 4-H program in Creek County. A "yes" or "no" response was solicited for each of seven possible new activities to determine if they would improve the 4-H program. Questions were also included to decide what would be the most appropriate method of informing 4-H members about activities and events.

There is a great desire for new and different 4-H programs in the county. Livestock judging is the most widely accepted judging team in Creek County with a large percent of leaders showing an overall interest in livestock related activities more than members. All said the 4-H program must offer a variety of activities to include the interest of everyone. It was indicated that it is almost essential that all leaders and members receive a county 4-H newsletter in order to keep them informed. County fund raising activities were favored over other types of funding for the 4-H program.

Jenkins, D.D. (1983). The perceptions that Oklahoma vocational agriculture teachers and their administrators have of the importance of and involvement in vocational agriculture leadership programs and activities. Oklahoma State University, Stillwater.

This study examined the perceptions that Oklahoma Vocational Agriculture teachers and their high school administrators have of the importance of and involvement in Vocational Agriculture leadership programs and activities. For the purpose of this study, 21 leadership programs and activities were organized under three distinct categories: Leadership Units of Instruction, Individual Leadership Activities, and Chapter Leadership Activities. A questionniare was developed and sent to 211 teachers and 191 administrators selected through a stratified random sampling process. Teachers and administrators were asked to rate each leadership program and activity as not important, slightly important, moderately important, greatly important, or extremely important.

They also were asked to rate the programs and activities on a similar scale dealing with the level of involvement. A total of 72.5 percent of the teachers and 82.2 percent of the administrators responded.

Vocational Agriculture teachers and their administrators generally agreed that Vocational Agriculture leadership programs and activities were of great importance. However, teachers did perceive the programs and activities to be of slightly higher importance of these programs and activities to all be equal, while teachers felt that Units of Instruction were slightly more important than activities and the Chapter Activities were slightly more important than Individual Activities. Teachers perceived their leadership programs and activities to have a great involvement level while administrators perceived that level to be of moderate involvement. However administrators' mean response was only slightly lower than that of teachers. Teachers felt that the involvement level was nearly the same in all three leadership categories, while administrators perceived the involvement in Individual Activities to be slightly lower than in Units of Instruction and Chapter Activities. In general, it was also noted that teachers and administrators both perceived the importance of leadership programs and activities to be slightly higher than the level of involvement.

Kellner, T.W. (1983). Nature and extent of agricultural economics, marketing, and farm management instruction in selected northwest district vocational agriculture departments. Masters Thesis. Oklahoma State University, Stillwater.

Forty-two vocational agriculture teachers in the Northwest District of Oklahoma were surveyed in regard to their teaching programs in the areas of agricultural economics, marketing, and farm management. A questionnaire was given out at the summer session of the vocational agriculture teachers' conference. Forty-one of the teachrs were present at the conference leaving one to mailed. All questionnaires were returned. The data obtained from these forty-two returned questionnaires were tabulated and analyzed and conclusions drawn and recommendations made.

In terms of over-all hours, the most-taught subjects were in order: (1) Analysis of S.O.E. Program; (2) Financila Records; (3) Farm Inventories; (4) Machinery and Equipment Management; (5) Loans and Interest. Farm management was the most taught area. Marketing was second and agricultural economics was the least taught. Vocational Agriculture IV was the class in which the three areas were taught the most. At least half of the surveyed teachers stated that they were sufficiently teaching each subject. All of the subjects in this survey had mean importance rating of Great

Importance or Much Importance. Reasons cited most for not spending a sufficient amount of time was "Do Not Have Enough Time." Fourteen percent of the teachers surveyed had access to a computer. The teachers surveyed in this study spent the average of 184 hours per teacher in the areas of Farm management, agricultural economics, and marketing compared to 124 hours per teacher in 1961.

Khemtong, P. (1983). An assessment of the effectiveness of selected aspects of the student teaching program in vocational agriculture as presently provided at Kasetsart University. Doctoral Dissertation. Oklahoma State University, Stillwater.

The primary purpose of the study was to determine perceptions held and judgements made regarding effectiveness of selected aspects of the present student teaching program. Responses were secured from three groups composed of (a) 12 college supervisors, (b) 53 cooperating teachers, and (c) 67 former student teachers presently teaching vocational agriculture. Demographic data were secured and analyzed, and analytical comparisons made of the judgements of each of the three groups regarding present and potential effectiveness of selected practices and patterns of the program.

Data responses secured from the selected categories of respondents revealed that a majority of cooperating teachers and college supervisors feel they were not well prepared, and that they had received little or no supervisory training. A sizable portion of respondents indicated that they felt 12 and 16 weeks to be the most desirable length for the student teaching period, and likewise 30 contact hours to be the most desirable length for observation participation. The practice of holding a three-day post-student teaching seminar met with a majority approval by each of the three groups, who also indicated that the program should be offered each semester. The strength of the program was the use of broad range and effective teaching methods by both cooperating teachers and college supervisors. Major recommendations included (1) curriculum modification; (2) development of a student teaching manual; (3) organizing a workshop with cooperating teachers and school administrators as participants; (4) more supervisory visits and assistance to student teachers from both college supervisors and cooperating teachers, and (5) implementation of an intensive methods study course for student teachers, given the four weeks prior to 12 weeks of student teaching.

Mibey, R.K. (1984). Career objectives of international students studying agriculture, faculty awareness of these objectives and judgements of both groups as to effectiveness of learning

experiences provided at Oklahoma State University. Doctoral Thesis. Oklahoma State University, Stillwater.

The major thrust of the research was an attempt to determine the relative effectiveness of selected educational experiences provided for international students studying agriculture. This assessment attempted to discover how these students were assisted in attaining their educational career objectives. The population for the study, in addition to involving 85 instructors currently teaching agricultural courses, also included 111 students from 32 countries who were scheduled to graduate during the period May 1983 to May 1984. Each instructor as well as each student completed questionnaires pertaining to demographic data while also responding to a common schedule relating to policy and practices currently in operation.

In general, the respondents indicated that (1) laboratory and field instruction, (2) classroom instruction and coursework, (3) extra-curricular activities, and (4) understanding of research design and application, as offered at O.S.U. are quite effective in preparing international students to meet career objectives. The extent to which learning experiences directed toward processes and their application in (1) rural and community development, and (2) communication and adult education are effective were judged to be of somewhat lesser effectiveness by both instructors and students. Students responded far more negatively than did instructors to a statement that students should not demand excessive time from instructors. Students were also less enthusiastic than were instructors about furnishing instructors a statement of career objectives. Recommendations were made in the areas of (1) workshops for instructors, (2) seminars for students, possible revision of present courses or development of new courses dealing with communication/adult education and with rural/community development, (3) providing for faculty recognition for effective work with internationals, (4) improvement of student/faculty relationships through increased effectiveness in advisement, and (5) further exploration of potential values of career objectives formulated by students.

Morgan, K.J. (1983). Comparison of selected characteristics of vocational agriculture departments in the northwest district of Oklahoma based upon high, medium, or low levels of livestock show participation. Masters Thesis. Oklahoma State University, Stillwater.

The primary purpose of this study was to determine levels of participation in show oriented activities within the Northwest District of Oklahoma. A secondary purpose was to make comparisons

of selected characteristics of the chapters and instructors within the levels determined and the relationship of these characteristics to the vocational agriculture program. Fifty-nine of the 63 departments (93.6 percent) of the Northwest District participated in the study. Data was gathered by the use of the 1982-83 FFA Annual Report and a questionnaire.

It was found that the greatest number of chapters were within the medium (6-10 shows) participation group. The remaining chapters were equally divided between low (0-5 shows) and high (11-17 shows) participation. Most chapters of the Northwest District had a school farm. The more a chapter participates in shows and fairs, the higher the teachers' ratings of their school farm and the chapters received more financial support from the community to help the students involved in the livestock show program. A large majority of the teachers in the Northwest District had 10 years or less of teaching experience in their present department. An extremely large number of teachers feel there was justifiable educational value in exhibiting livestock beyond the county level and further reported that over 50 percent of their students' SOE programs consist solely of show animals.

Participation in state chapter award programs was exceptionally strong with 100 percent of the chapters receiving the Superior Chapter award and participation in national chapter award program was weak with no chapters receiving a National Chapter award in the past four years. Chapters having members competing for state or national FFA offices more or less followed the same pattern with involvement in state FFA offices and no involvement in national FFA offices. It was concluded that, as participation in shows and fairs increased, participation of students applying for and receiving the State Farmer degree, students applying for the American Farmer degree, and number of foundation awards given at the chapter level also increased. Furthermore, as participation in shows and fairs decreased, participation in all the dirrerent areas of contests increased.

Mortensen, D.V. (1984). Perceptions of selected goals in village development for Honduras by three levels in the development chain. Doctoral Dissertation. Oklahoma State University, Stillwater.

The major purpose of this study was to ascertain perceptions relative to village concepts and programs as held by individuals categorized in one of three levels of program involvement in the development chain as it is presently operating in Honduras. Level one consisted of U.S. Administrators, level two consisted of Middle Management Administrators and Supervisors, and level three consisted of Village Level personnel. A questionnaire was

developed with 46 questions pertaining to the village development process. These questions could be categorized into four broad development areas: (1) Agriculture, (2) Health, (3) Education, and (4) Administrative/Developmental.

There was evidence of general agreement among the three levels in the development chain in regards to importance and achievement of the selected development categories. Also the three groups in the development chain perceived the selected village development goals as highly important, thus indicating that the goals being attempted in the seventeen villages are substantial goals deserving of attention and effort. Among the 44 village development goals comprising the 4 development categories, those having the highest importance mean scores at the village level were: (1) villagers able to read and write, (2) potable water available at or near each homesite, (3) village development leaders adequately trained, (4) family health improved, and (5) adequate housing available to all villagers. Those village development goals at the village level having the highest perceived achieved mean scores were: (1) visits to village made often by CEDEN extension agents, (2) CEDEN extension agents adequately trained, (3) cooperation developed between village and DECEN, (4) adequate primary education locally available, and (5) interest and enthusiasm exhibited by extension agents. It was also concluded from the findings that a number of individual village development Agriculture, Health, Education, and Administrative/Developmental category items were perceived by respondents of the Village Level as being critically low in achievement. From the findings of the study there is no escaping the fact that citizens of the villages in Honduras are receptive, eager and quite able to recognize their needs and appear equally willing to participate in planning, implementing and carrying to completion programs which will improve the quality of life in their respective villages.

Ndifon, H.M. (1983). The feasibility of a community based food corps program in Ikom division of Cross River State Nigeria. Doctoral Dissertation. Oklahoma State University, Stillwater.

The purpose of the study was to determine the feasibility of a community based food corps program and the established recommendations as to how agricultural extension workers can most effectively direct and guide farmers to become involved in such a program. Further, the study sought to discover how extension workers and farmers might cooperate through a joint effort to enhance food crop production and enable success for such a program. Responses were obtained from both producers and extension staff in Ikom Division through the questionnaire method. Twenty-one sampling units were selected from a total of thirty sampling units. From

each sampling unit, ten farmers were randomly chosen using the grid sampling technique. A total of 100 food crop producers and 110 tree crop producers were selected as representative respondents. A complete survey was carried out on all twenty-two extension staff in the sampling units. Seventy (63.64 percent) and eighty-four (84.00 percent) respondent participation was achieved from food crop and tree crop producers respectively, while eighteen (82.00 percent) extension staff participation was achieved.

Producers reported major problems to be (1) Cost of materials for farming operations and (2) prices received for farm products. While most producers indicated a willingness to work with Extension Staff, the Extension Staff perferred a joint committee of farmers and Agricultural Extension Staff for heading a food Corps program. Producers perceived that yam, cassava and cocoa-yam were the most important food crops to use in the program. Producers and Extension Staff indicated that the most effective method of involving people in the program is by having a demonstration farm in the village. Also, producers and Extension Staff should organize regular meetings to improve communication between both groups. The initial phase of the program should begin with three crops - yam, cassava and cocoa-yam.

Proctor, D.L. (1983). Sources of agricultural information used by wheat and cotton farmers in Jackson County, Oklahoma. Masters Thesis. Oklahoma State University, Stillwater.

The purpose of this study was to identify the principal communication channels for agricultural information and frequency of use by Jackson County farmers. Questionnaires were mailed to 147 Jackson County farmers in the spring of 1983 to gather data for the research effort. Sixty-nine (47.5%) of the farmers participated in the study. The questionnaire was designed so that the respondents answered questions that would determine the respondents' socioeconomic characteristics, perception of Extension credibility, the principal communication channels used for agricultural information, and frequency of use.

Data in this study indicated that over 87% of the respondents had contacted the Extension office. Over 75% had participated in an Extension sponsored meeting, and over 95% read Extension news columns. Respondents indicated Extension to be most helpful and trustworthy, and tended to provide the most up-to-date agricultural information and technical developments. In general, respondents indicated magazines as the primary mass media source of information. Radio was frequently used, followed by newspapers. Television and fact sheets were seldom used. Respondents showed a slightly greater reliance on ASCS than Extension, while SCS and commercial dealers are seldom contacted. Respondents indicated

radio, the ASCS office, and Extension personnel as the most convenient source for information, and Extension agents must recognize the advantages and disadvantages of mass media channels of communication.

Rafie, A. Developing a high school vocational agriculture curriculum model for developing countries. Doctoral Dissertation. Oklahoma State University, Stillwater.

The major purpose of this study was to develop a high school vocational agriculture curriculum model. A secondary purpose was to determine the applicability and importance of such a model for developing countries. The model for this study was developed by review of the available literature, interviews with curriculum specialists, and analysis and synthesis of the elements collected. The population for this study was one hundred fourteen international graduate students majoring in Agricultural Education who were selected from eighty Land Grant universitiesin the United States. The information needed for this study was obtained through the use of a questionnaire. The questionnaire was divided into two parts. The format of the model was presented in the first part of the questionnaire and it contained CURRICULUM PLANNING, CURRICULUM IMPLEMENTATION and EVALUATION PROCEDURE as the three basic components. The second part of the questionnaire was used to determine the importance of the contents for a high school vocational agriculture program in developing countries.

It was found that CURRICULUM PLANNING, CURRICULUM IMPLEMENTATION, and EVALUATION PROCEDURE as the three basic components of a high school vocational agriculture curriculum model are applicable with minor changes for developing countries. It was also found that the high school vocational agriculture curriculum contents used in this study are of moderate importance for developing countries. An additional finding was that more research is needed for sheep production in developing countries.

Tipton, B.L. (1984. A feasibility study of a 4-H health program of sex education in Tulsa County, Oklahoma. Doctoral Dissertation. Oklahoma State University, Stillwater.

An evaluation of 4-H attitudes toward a possible 4-H health program of sex education was made in the spring of 1984. The total population was the 340 Tulsa County 4-H parents whose children were enrolled in 4-H as of November 30, 1983. Sample size for a .95 confidence level required 125 respondents. The study's questionnaire included 19 forced response questions; four dealing with demographic data of the 125 respondents, six covering the

opinion parents had toward sex education in general, and then nine questions on a 4-H sex education program specifically. Administered by telephone interview, the questionnaire was answered by 94 percent of those randomly selected to be respondents. Frequency counts and frequency percentages were used to develop data for analysis in order to arrive a conclusions.

The data obtained was presented in tabular form and discussed as it related to the objectives of this study. It was found that 88 percent of interviewed 4-H parents saw a need for formal sex education outside the home and 79 percent thought a 4-H sec education program was a good idea. These parents indicated that they thought most schools and homes were inadequate in their techniques on the subject of sex. Sixty-five percent of the black and only 29 percent of the caucasians interviewed said they were unaware of how good or how bad a job the school system was doing concerning sex education. Four-H parents felt peers provide most of the information when youth had a question regarding sex. The most supportive respondents of a 4-H sex education program were mothers, parents of younger 4-H children (nine to 12) and parents of female 4-H'ers. Black tended to be more in favor of a possible program than were caucasians. Condlusions of the study were that 4-H sex education classes be divided by age and that parent attendance not be mandatory. Finally, all seven sex education topics presented to the respondents for comment were perceived as being acceptable subjects for discussion. Recommendation was made that similar studies be conducted on populations of 4-H administration, 4-H agents and 4-H members before initiation of a 4-H sex education program.

Vick, R.L. (1984). 4-H leaders' anf 4-H members' attitudes toward selected aspects of the 4-H program in Pittsburg County. Masters Thesis. Oklahoma State University, Stillwater.

The purpose of the study was to gain information about the attitudes of 4-H members and 4-H leaders toward selected aspects of the 4-H program in Pittsburg County. One hundred eight 4-H members and 30 leaders response to questions were utilized. Members and leaders selected the main statement relating to why 4-H'ers participated and why 4-H'ers did not participate in county activities. Activities studied were: Share-The-Fun; County Rally; Boys and Girls Dress Revue; and County Fair. Item counts, percentages and rankings were used to represent the data from the study groups for the analysis of the results. Also, comparisons of the responses were made and deduction to the most significant factors made.

4-H'ers participated in county 4-H activities because they felt it would help develop their leadership skills and help them

with their personal development. These were found to be the predominant reasons for their participation in county activities. Leaders and parents had the least influence on decisions made by the 4-H members in this study. Lack of interest was found to be the main reason why 4-H'ers did not participate. 4-H activities helped make a change in 4-H'ers attitude for the betterment of themselves, and helped 4-H'ers gain confidence in themselves and their abilities. Also, 4-H members enjoy the county 4-H activities.

Webb, D.N. (1984). Role of the cooperative extension service as perceived by personnel of other selected soutwest Oklahoma USDA agencies. Masters Thesis. Oklahoma State University, Stillwater.

The purpose of this study was to determine the perceptions of related U.S.D.A. agency administrators in 20 Southwest Oklahoma Counties concerning current Cooperative Extension program areas and implications for future programs. Questionnaires were mailed to 59 U.S.D.A. administrators during the Spring of 1983. Thirty-nine (66 percent) of the agency administrators responded to the survey. The format of the questionnaire included short answer items and statements requiring answers on an interval scale. The survey was comprised of 25 short answer questions and 40 items with designated categories regarding levels of current program effectiveness and implications for priority of future programs. Since sampling was not involved and the attempt was made to survey all administrators of the three selected U.S.D.A. agencies, descriptive statistics were utilized to treat the data. Statistical analyses used to describe the data included frequencies, percentages and means.

The results of the study revealed that over 25 percent of the U.S.D.A. administrators surveyed had from 11 to 15 years of service while over 76 percent of the respondents were housed in agency offices with a "mostly rural setting." A majority of the respondents indicated that their contact with Cooperative Extension had come through their families' involvement with 4-H and their personal involvement with the Agricultural program. Furthermore, the respondents' perceptions revealed that educational meetings and personal contact seemed the most effective methods of tranfering information to extensionclientele. As the result of "a common clientele" the agency in which the administrators were employed determines to an extent their perceived awareness of current programs and priorities for future programming. Agriculture seemed to be the program area perceived as being the most effective with regard to present programs. Specific priorities for future programming was perceived to be in the areas of Agricultural Economics and Youth Leadership Development. Cooperative Extension should develop a public relations program designed to communicate program emphasis and awareness to related U.S.D.A. agencies to meet the needs of "a common clientele."

PENNSYLVANIA

Ayewoh, M.E. (1983). The professional competencies needed by agricultural extension agents in Bendel State of Nigeria. Ph.D. thesis. The Pennsylvania State University: University Park.

The main purpose of this study was to identify the professional competencies needed by extension agents in the Bendel State of Nigeria Ministry of Agricultural and Natural Resources. A secondary purpose was to determine when the professional competencies should be learned, and a tertiary purpose was to describe who would benefit most once the agricultural extension agents acquired these competencies. The study utilized two groups of extension personnel within the Bendel State Ministry of Agriculture and Natural Resources: (1) state extension staff, and (2) local government area staff. A survey instrument was developed which included selected extension personnel's biographic and experiential characteristics and 61 professional competency statements. State and local government area (LGA) staff indicated that 60 of the 61 competency statements were "highly needed" by the extension agent. No significant differences existed between the state and LGA staff regarding their perceptions of the need for competencies in (1) program planning, (2) program execution, (3) program evaluation, (4) teaching, (5) communication, (6) understanding human behavior, (7) young farmer's club. A statistically significant difference was observed in the Administration and supervision competency category.

Burns, G.K. (1984). Development and evaluation of a slide set and prepared script on the status of the Pennsylvania peach industry as of 1983 and preliminary findings of peach integrated crop management (PICM). Master of Education paper. The Pennsylvania State University: University Park.

The major purpose of this study was to develop and evaluate a slide set and prepared script which could be used to convey information regarding the current (1983) status of the Pennsylvania peach industry and the preliminary findings of the Peach Integrated Crop Management project. This study provided educational materials Cooperative Extension agents could use to improve and develop tree fruit programs for their own local area. Additionally, the study helped peach orchardists refine their skills for more successful peach production. A secondary emphasis was to determine, through the evaluation, where improvements could be made in future Extension programming for commercial fruit growers. The study involved gathering summaries and unsummarized data available to date concerning work on a project entitled "Peach Integrated Crop

Management." This was obtained from scientists at The Pennsylvania State University Research Laboratory in Biglerville, Pennsylvania. The author combined this information and added another area relative to the economic status of the industry, as of 1983. A slide set, fact sheets and an evaluation form based on the above information were developed. After acceptance and approval by the scientists at the fruit research laboratory, the script was tape recorded. This audio-visual presentation was then given throughout the state at the 1984 county winter fruit grower meetings. The evaluation was performed by all the growers in attendance at the Adams, Franklin, York and Snyder county meetings.

Crays, J.D. (1984). Characteristics of/and management practices used by Pennsylvania sheep producers. Master of Education paper. The Pennsylvania State University: University Park.

The Northeast Regional Integrated Reproduction/Management Sheep Committee identified as a priority the collection of "benchmark" producers data to assist in the identification and planning of future long-range regional and/or state Extension programs. Specific study objectives were to identify the major marketing practices, agronomic practices and economic production factors for Pennsylvania sheep producers. A random sample of 725 producers in nine Pennsylvania counties were surveyed, with an 84 percent response rate. The profile of sheep producers revealed that the major problems encountered by producers related to flock health, marketing options, reproductive efficiency and sheep husbandry skills. Producers were asked to indicate their preferences for types of educational assistance from the Extension service. Newsletters, special publications and special workshops were identified as important delivery modes for future Extension programming. Utilization of the computerized sheep production record keeping program was viewed as an important future tool for electronic marketing and management records.

Cromwell, S.E. (1983). The development of a course of study planning guide for vocational agriculture. Master of Education paper. The Pennsylvania State University: University Park.

The development of a vocational agriculture course of study is essential for community-based vocational agriculture programs. The purpose of this paper was to develop a systematic approach for developing a production agriculture course of study. A review of the literature identified the major concerns in course of study development and provided a basis for the initial design of the course of study planning guide. The initial guide was reviewed by

a screening committee consisting of the Agricultural and Extension Education staff of The Pennsylvania State University and 21 Pennsylvania vocational agriculture teachers. The vocational agriculture teachers had varying years of teaching experience and served as cooperating teachers for student teachers. The screening committee met as a group, evaluated, and revised the planning guide into its final format. The planning guide was then introduced at three regional workshops for Pennsylvania beginning vocational agriculture teachers. As a result of using the guide in the three workshops, additional revisions were made to the planning guide.

The product developed was the publication, "Course of Study Planning Guide." The planning guide contained the following major sections: (1) identifying community needs, student needs, and job opportunities; (2) developing a program philosophy and objectives; (3) utilizing an advisory committee; and (4) organizing a four-year vocational agriculture plan, including the summer instructional program and supervised occupational experience program.

Fowler, D.P. (1984). The planning, implementation and evaluation of an inservice training program in dairy udder health. Master of Education paper. The Pennsylvania State University: University Park.

In 1981 the Program Committee for Agriculture, Pennsylvania Cooperative Extension Service identified the improvement of udder health as a priority for Extension programming. The purpose of this study was to develop a comprehensive educational mastitis program that county extension agents and selected veterinarians could present to diary farmers throughout the state, and thus reduce the demand on specialists time and increase the number of dairymen who could be reached with information about mastitis. The specific objectives were: (1) to prepare visual aids and assemble written materials that could assist extension specialists in training county agents and veterinarians to present a mastitis control program to dairy farmers and (2) to evaluate the effectiveness of training county agents and veterinarians, using these materials, to conduct an educational mastitis program for dairy farmers. The study was limited to Pennsylvania Extension agents and veterinarians in eight (8) geographic regions of the state. The study was limited to twenty-four (24) Extension Agents, twenty-four (24) veterinarians and 742 farmers who participated in an inservice program. The nonequivalent control group design was utilized. The results indicate the program was effective in teaching county agents, veterinarians and dairy farmers the basics of dairy herd udder health.

Gerstenlauer, D.L. (1983). Consumable and refundable supply items for production agriculture mechanics laboratories as influenced by selected program and vocational agriculture teacher characteristics. Master of Science thesis. The Pennsylvania State University: University Park.

The purpose of this study was to develop a list of basic consumable and refundable supplies for an agricultural production mechanics laboratory. Emphasis was placed on teacher background, department resources, units of instruction, jobs available in the community, and laboratory projects used. The study was designed as a descriptive survey with the scope limited to production agriculture programs in Pennsylvania. The population was 72 vocational agriculture teachers selected from the Pennsylvania vocational agriculture teacher directory. Each selected agriculture department was sent a survey instrument to be completed by the selected teacher. One-third (24) of the teachers received a woodworking survey, one-third (24) received a metal working survey, and one-third (24) received a survey concerning all other areas of agricultural mechanics laboratory consumable supplies. The instrument was designed so that respondents could provide information about their department, community and the amount of consumable supplies needed. A total of 47 (65%) of the teachers responded; however, due to missing data or incomplete returns, only 41 (57%) of the questionnaires were used in the analysis. Both tabular and verbal descriptive analyses were prepared listing the variables, number of responses, mean responses, the standard error and the ranges. In addition to developing a basic list of consumable and refundable supplies, an extensive description of nonsupply variables is presented. These nonsupply variables describe the community, department and teachers of programs in the study.

Gray, J. (1984). Effect of safety clothing on Pennsylvania turkey hunters' attitudes toward safety and hunter success. Ph.D. thesis. The Pennsylvania State University: University Park.

This study described turkey hunters' attitudes toward safety clothing as related to turkey hunting. A secondary purpose was to determine the relationship between selected demographic variables and hunting situational variables and hunters' attitudes. A random sample of 120 active Pennsylvania "expert" turkey hunters was selected and randomly assigned to one of the three treatment groups: (1) those wearing a fluorescent orange cap, (2) those wearing a camofluorescent orange cap, and (3) those wearing a camouflage cap. These groups were rotated in successive turkey hunting seasons. Turkey hunters were surveyed to obtain

demographic data relative to marital status, age, sex, and other background variables. All turkey hunters in the treatment groups completed a pretest prior to the Spring 1982 treatment and a posttest in the Fall. The experimental treatment involved having each hunter rotate by season the three hunting caps used in the study and complete daily record logs of field observations. Certain demographic characteristics were related to hunters' attitudes toward blaze orange. These were: occupation, whether or not they were a hunter safety instructor, and their level of safety concern. Such characteristics as marital status, age, accident experience, Wild Turkey Federation membership, and type of firearm used were not related to attitude scores. Statistical data revealed that, after one season's experience (Spring 1982), no relationship was found between treatment level and attitude score. Hunting success, cross-referenced by three seasons, was not different among hunters wearing the blaze orange, camofluorescent orange, and camouflage caps. Success was measured by sightings reported and number of turkeys harvested.

Howard, B.C. National FFA dairy cattle and milk quality/dairy foods contest evaluation (1984). Staff study. The Pennsylvania State University: University Park.

The purpose of the study was to determine the educational value and usefulness of the Dairy Cattle Contest and the Milk Quality/Dairy Foods Contest as perceived by the 1981 national contest participants. The target population consisted of 97 contestants participating in the National FFA Dairy Cattle Contest and 90 competing in the National FFA Milk Quality/Dairy Foods Contest. One hundred eighty-seven individuals completed the questionnaire. A two-part questionnaire was used to collect data. The first-part included 15 questions related to personal contestant information. The second section contained 40 value statements with a Likert-type scale. The attitude of contest participants was positive toward the educational value of the contests.

Matsebula, S.P. (1984). Guidelines to identify priorities in agricultural research in production farming for the small farmer in Swaziland. Master of Science thesis. The Pennsylvania State University: University Park.

In many developing countries the beneficiaries of agricultural research have been those involved in large-scale and plantation-type farming. In recent years, this trend has changed, and agricultural research now focuses on the poorer, subsistence-type farming population. This has led to a change in

the way in which research is planned and performed. The objective of this study was to develop guidelines that could be used to identify priorities for agricultural research in production farming for the small farmer in Swaziland. Utilizing the delphi technique, a panel of experts familiar with the current agricultural research situation in Swaziland were surveyed. The panel members responded to a series of three questionnaires. A total of 29 factors from the Delphi technique process were identified and grouped into four major categories: (1) research policy, (2) agricultural production process, (3) research feasibility, and (4) farmer feasibility. The means of the four categories were calculated and revealed the categories titled "agricultural production process" and "research feasibility" were the major categories to be considered when setting guidelines for identifying agricultural research priorities. The categories titled "farmer feasibility" and "research policy" had lower mean scores, which showed that they were considered less important; however, these categories were not significantly less important, than the other two categories. The values of standard deviation for factors in all four categories showed an "average consensus" among respondents. The study recommended that the process of setting guidelines to identify priorities in agricultural research could be advantageously linked to the Farming Systems Research approach, a system designed as a holistic study of the conditions and situations that affect the development of agricultural research.

Odell, K.S. (1984). Factors influencing student selection of the Pennsylvania State University's College of Agriculture. Master of Science thesis. The Pennsylvania State University: University Park.

The major purpose of this study was to secure information that could be used to improve recruitment practices and develop a profile of freshmen students in the College of Agriculture at The Pennsylvania State University. All individuals offered admission as freshmen to baccalaurate degree programs in the College of Agriculture at The Pennsylvania State University for Fall Semester 1983 made up the study population. A 74 percent usable rate of return was obtained through the mailed questionnaire that was sent to the 650 individuals involved in the study. Data were analyzed utilizing descriptive statistic measures of variability and central tendency. Frequencies, percentages and means were reported where applicable. Data were also analyzed by attendance status to determine the characteristics of individuals attending as well as those not attending after being offered admission as freshmen in the College of Agriculture. Individuals attending the College of Agriculture and the individuals not attending were found to be

quite similar. Individuals not attending ranked higher academically than the individuals attending. A much larger percentage of individuals attending were Pennsylvania residents when compared to the individuals not attending. Factors influencing the selection of Penn State or another institution were determined for individuals attending and those not attending. A profile of freshmen attending the College of Agriculture was also developed.

Ragan, L.C. (1984). Student achievement and the use of an instructional unit in agricultural recordkeeping. Master of Education paper. The Pennsylvania State University: University Park.

The primary purpose of this study was to develop and field test an instructional unit in agriculture recordkeeping to accompany the revised Pennsylvania Agricultural Production Program Record Book. The relationship between achievement scores on pretest and posttests of students receiving the instructional unit in agricultural recordkeeping and students receiving the traditional instruction in agricultural recordkeeping as measured by grade was examined. Two hypothesis were developed for testing. An instructional unit for agricultural recordkeeping was developed to complement the 1984 revised Pennsylvania Agriculture Production Program Record Book. A 25-item multiple choice recordkeeping test was developed to measure cognitive achievement. The design for this study was the non-equivalent control group design. Eight schools with vocational agriculture programs in Pennsylvania were selected. There was no significant difference on pretest scores between students who received an instructional unit in agricultural recordkeeping and students who received traditional instruction in recordkeeping as measured by grade. However, there was interaction between the variables grade level and achievement scores on the pretest ($F=22.941$, $p<.000$). There was a significant difference on posttest scores between students who received an instructional unit in agricultural recordkeeping and students who received traditional instruction in record keeping as measured by grade level. The principle conclusion of this study was that the unit of instruction was effective in promoting cognitive learning in agricultural record keeping for students in the tenth and eleventh grades.

Scanlon, D.C., Pennock, R. & Harmon, H.L. (1984). A proposed model for identifying agronomic competencies essential for job success: a delphi study. Staff study. The Pennsylvania State University: University Park.

Within the College of Agriculture at The Pennsylvania State University, there was a need to determine faculty perceptions of what constitutes "essential" competencies for graduates of baccalaureate degree programs within a specific department. The purpose of this research was to demonstrate a systematic approach for identifying essential competencies in a specific curriculum of the College. Specifically, the research sought to determine faculty perceptions of essential agronomic competencies needed by undergraduate students enrolled in the Agronomy curriculum at The Pennsylvania State University, and to determine the extent to which those competencies identified are related to success on the job. A modified version of the Delphi technique was used for data collection. In order to use this method, a panel of experts had to be selected from the 36 full-time faculty members in the Agronomy Department. The data clearly suggested that students are being taught those competencies considered "essential" by the faculty. A majority of the students made significant improvement in mastering essential skills throughout their college period. A major limitation of this portion of the study lies in the fact that there was no attempt to determine the degree of mastery that students possessed regarding each competency. From the survey instrument there was no way to determine whether students had mastered the competency to the point where they would apply the concept or demonstrate the skill consistently and correctly. While the data clearly suggest that students are learning the "essential" competencies it is inconclusive as to where and how the learning is taking place!

Schoonmaker, R. (1984). Development of a 4-H hydroponics project. Master of Education paper. The Pennsylvania State University: University Park.

Recent enrollment figures for Pennsylvania 4-H horticultural projects indicate increasing interest in hydroponics; however, no hydroponic references were currently available for direct use by 4-H club members. The purpose of the paper was to develop a hydroponics project 4-H member guide and a leader guide. The hydroponics project was targeted at teens who had completed some basic horticulture projects and were ready for a more advanced project. The product of this developmental paper consisted of two 4-H project guides for hydroponics. The 4-H Member's Hydroponics Guide focused on the set-up, monitoring, and evaluation of two hydroponic gardening experiments with lettuce or tomatoes. The experiments demonstrated two methods of hydroponic culture and the advantages and disadvantages of each. The experiments assist participants learn the merits of good management, precision measurement, good recordkeeping, and the basic techniques used in

hydroponics. Commercially prepared fertilizers are used for simplicity. Homemade equipment is used to demonstrate that there are economical alternatives to costly commercially available systems. The 4-H Leader's Hydroponics Guide was similar in format to the Member's Guide but more detailed information was included on methods (used in the Member's Guide) and related topics. The Leader's Guide also included a list of references and sources for obtaining information, equipment, and supplies. The project evaluation, in the form of a five-point Likert-type scale, was based on usefulness of the guides, appropriateness of reading level, accuracy of content, and overall rating by selected 4-H agents, and leaders.

Sharkey, D.C. (1983). The development and validation of task sheets for use in teaching garden center and nursery skills. Master of Education paper. The Pennsylvania State University: University Park.

Garden centers and nursery outlets employ large numbers of high school students and recent high school graduates. Employers are seeking information to better help them provide training at the job site. The purpose of this study was to develop task sheets for garden center/nursery industry personnel to use in teaching garden center employees. A list of 53 specific garden center skills was sent to 20 garden center managers and horticulture teachers. The respondents rated the skills in rank order of importance to entry level garden center employees. Fifteen skills were identified as having "top priority", and task sheets were developed for those skills. Task sheets developed were reviewed and evaluated by a panel of experts consisting of industry and education personnel. Input from the panel of experts was used to revise the task sheets prior to publication. Task sheets developed related to growing plants, identification and use of ornamental crops, cultural practices, customer relations, mechanics, and nursery skills.

Tucker, T.W. (1983). Development and evaluation of a manual for interpretation of year-end farm business analysis reports. Master of Education paper. The Pennsylvania State University: University Park.

The major purpose of this study was to develop and evaluate a manual for assisting adult farmer instructors in conducting year-end farm business analyses. A need for such a manual was expressed by participants of the 1982 Farm Management Workshop for instructors involved in the Pennsylvania Farm Management Education Program (PFMEP). A manual was developed and submitted to a panel

of experts for review of technical content. All adult farmer instructors participating in the 1983 PFMEP Farm Management Workshop used the manual to aid them in analyzing a case farm business during a workshop session. During this exercise, participants were asked to calculate certain performance factors needed for a year-end business analysis. Interpretation of these performance factors using comparative analysis and trend analysis took place in three small groups and again in the larger group. Prior to the discussion in the entire workshop group, participants evaluated the manual using a ten item Likert-type scale. Data collected were analyzed by calculating the distribution and mean of responses on each of the ten items. Survey responses indicated that the manual was useful in making a year-end farm business analysis. The instructors believed the manual would improve their ability to interpret farm business analysis information.

Blaha, F.J. (1983). Levels of job satisfaction and role perceptions held by Extension Agents of INTA's Regional Parana in Argentina. Master's thesis. Texas A&M University, College Station.

In the Republic of Argentina, official agricultural research and extension activities are a responsibility of INTA (National Institute for Agricultural Technology). In the fall of 1982, a study was made of the entire population (39 Extension agents) of one of INTA's administrative regions -- the Regional Parana with 17 Extension agencies -- in an attempt to determine the level of job satisfaction and the perceptions held by Extension agents with regard to their present and future roles as change agents.

A mailed questionnaire was used. As the whole population was surveyed and sampling was not involved, descriptive statistics were used to analyze the findings. Of the 35 questionnaires returned, 32 were usable. Three Extension agent categories were analyzed: agency heads, agricultural agents, and home economists. Job satisfaction was measured with 76 structured statements using a modified Likert scale and 7 open-ended questions. A semantic differential scale covering three concepts was used to ascertain job attitudes. Agents were also asked to respond to 30 traditional or nontraditional programs/activities with a YES/NO as to whether these areas pertained to their functions. In affirmative cases, they were then asked to select the most important role they perceive themselves as following from among seven previously defined roles: Diagnostician-Analyst, Planner, Motivator, Advisor, Intermediary, Evaluator, and Change Agent.

Generally, Extension agents were satisfied with their jobs. On the semantic differential scales, agents responded to the positive one-third of the scale. With regard to traditional and nontraditional programs and activities, eighty percent of the Extension agents responded in the affirmative that those 30 items were part of their job functions. Those who responded affirmatively believed their most important role to be that of Motivator (26.3%), followed by Change Agent (23.8%), and Intermediary (18.5%). The least important roles were those of Evaluator and Planner (4.6% each). Role perceptions differed with respect to the agent categories for both traditional and nontraditional program areas and activities.

Curry, T. L. (1984). Identification of professional competencies needed by students in agricultural education pursuing agricul-

tural careers in non-school settings. Doctoral dissertation. Texas A&M University, College Station.

The purpose of this study was to determine which competencies were needed by undergraduate students in agricultural education who desire to pursue agricultural careers in non-school settings. Two research questions were addressed: (1) What competencies were needed by students in agricultural education who were pursuing agricultural careers in non-school settings? and (2), What competencies were needed both by students in agricultural education pursuing agricultural careers in non-school settings (competencies that were included already in the existing curricula for teacher education)?

The two research questions were addressed by eliciting perceptions from representatives of those agricultural industries or organizations (non-school settings) in which students in agricultural education pursue careers. Twenty-three "experts" were identified by a lay advisory committee to serve as a Delphi panel. The modified Delphi technique used in the study involved the "experts" in identifying and rating competencies in a sequential series of questionnaires. Based on the "experts" ratings, comments, and support statements, one hundred and twenty-two competencies were identified and classified as to "need" by students in agricultural education.

Four conclusions were drawn and supported by the findings. (1) Twenty generic competencies were needed by students in agricultural education who were pursuing agricultural careers in non-school settings. (2) Sixty-five competencies were generic to the needs of students in agricultural education who were pursuing agricultural careers in school and non-school settings. (3) Most competencies that received consensus relative to "need" by students emphasized "people skills" rather than "technical skills." (4) Representatives of agricultural organizations or industries can identify appropriate competencies to be considered for inclusion in curricula designed for students in agricultural education who were pursuing careers in non-school settings.

Ford, J. T. (1984). An assessment of the agricultural mechanics component of the production agriculture curriculum in Texas. Doctoral dissertation. Texas A&M University, College Station.

The purpose of this study was to assess the status of agricultural mechanics instruction within the production agriculture curriculum in Texas high schools.

The population of 1,494 teachers of vocational agriculture

teaching one or more production agriculture classes during the 1983-84 school year was randomly sampled to choose 225 teachers. A questionnaire was developed based upon the 68 agricultural mechanics topics listed in the basic curriculum guide for production agriculture in Texas. The questionnaire was field tested, revised, and mailed to the participants. There were 191 responses from the 225 teachers sampled for a return rate of 84.9%. Data were analyzed using descriptive statistics and simple or multiple correlations as appropriate.

The teachers reported spending approximately the recommended time for teaching each topic. They also reported that 67 of the 68 topics were of at least "average" importance, they possessed at least "average" competence for all topics, and the adequacy of material resources was "average" or above for 57 of the topics.

There were strong correlations between importance ratings and teacher competence ratings and between importance ratings and adequacy of material resources for all 68 topics. Importance ratings for topics were influenced more by teaching assignment than by years of teaching experience, university where certified, semester credit hours of agricultural mechanics course work, agricultural mechanics workshop attendance, or geographical area of the State. Teacher competence was most closely correlated with total semester credit hours of course work followed by agricultural mechanics workshop attendance and current teaching assignment. The adequacy of material resources was correlated most closely with the economic commitment per student. The adequacy of material resources and a school's average daily attendance yielded mostly negative correlations.

Cepica, M. J., & Igo, C. G. (1984). Integration of computer related instruction in Texas vocational agriculture programs. Texas Education Agency. Texas Tech University.

The purpose of this study and development project was to determine the current usage of microcomputers, to determine and develop needed software, and to determine teacher inservice needs in Texas vocational agriculture programs. The population surveyed in this study was composed of all the vocational agriculture departments in the ten geographic areas of Texas. A teacher questionnaire was developed which included short answer, listing, and open-ended questions. This questionnaire was sent to all 922 vocational agriculture departments in Texas. After a followup mailing, 446 usable questionnaires were returned for a 50.4 percent return rate.

The software programs most often requested by vocational agriculture teachers were Supervised Occupational Experience Record Books, Shop Inventories, Parliamentary Procedure and Rations. Existing software in the identified areas was evaluated in relation to cost, adaptability to Texas vocational agriculture programs, suitability of software for intended students, and the quality of the program in regard to interaction and graphics. Two microcomputer programmers were then employed to develop the needed software for the Texas vocational agriculture programs.

Bereciartu Arias, F.M. (1984). Grain corn demonstration of quality performance upon some varieties in Cache Valley, Utah, summer 1983. Masters thesis. Utah State University, Logan.

In the summer of 1983, the author grew a 629 foot long and 50 foot wide plot of grain corn (Zea Mays) at the USU North Experiment... in Logan, Utah. The purpose of the experiment was mostly ... practical experience in terms of planning, conducting, and evaluating a field demonstration, to stimulate Cache Valley farmers' interest in this important food crop and to report the findings to them.

This report is based on the result of growing ten different varieties of grain corn on a plot of land. They were planted June 3, 1983, with two rows of each variety 30.5 inches apart and 6.5 inches between plants. The harvest was October 19, 1983. The corn had been frozen prior to harvest. Yield performance, nutrient content, average height of plants, and plant density were determined from random samples taken throughout the plot.

The results revealed that Pride 1169 had the highest yield of bushels per acre and was immediately followed by Cenex 2083 and Funk G 4040. The lowest yields were Pioneer 3950, Idahybrid SS303, and Pride X992.

The nutritional value revealed that Pride X992 and Pioneer 3950 were the highest in protein content, whereas Pride 1169 and Cenex 2083 were the lowest.

The results of this test demonstration are not intended to be a scientific measure of the production potential of the hybrids tested due to lack of replication. The test was conducted primarily for experience with the demonstration method and its use as an educational process.

Bird, D.L. (1984). Relationships between the quality of supervised occupational experience programs in vocational agriculture and occupational achievement. Masters thesis. Utah State University, Logan.

The purpose of the study was to assess the relationship of SOEP quality to subsequent employment. The individuals in this study were 100 Utah vocational agriculture graduates randomly drawn from participants in a previous study done by Denton (1982). Two index means were used to evaluate the quality of the SOEP and the occupational success of each respondent.

Of the 100 respondents questioned, 50 were male with nonagricultural-related occupations, 24 were male with

agricultural-related occupations, and 5 were female with nonagricultural-related occupations. There were a total of 15 students enrolled in higher education. The remainder of those surveyed were two unemployed, one deceased, and three nonrespondents.

SOEP quality was defined as scope + relationship of SOEP to original stated occupational goal + management responsibility. (Scope)(.33) + (Relationship of SOEP to original occupational goal)(.33) + Management scope was divided into 2/3 (.221) for size of project and variety of project 1/3 (.109).

Management was a value recognizing increase in scope, purchase decisions, and use of evaluation criteria (efficiency factor computation) for a total of 1/3 of quality.

The main findings were as follows:

1. There were a significant number of respondents that had SOEP's not in the area of their occupational goal.
2. There were several respondents that indicated their occupation now, and their occupational goal and first full-time job, were considerably different.
3. Those in agricultural-related occupations had higher SOEP quality scores than those not in agricultural occupations, primarily because the relationship of the SOEP to the occupational goal was higher and was significant to SOEP quality score.
4. Respondents felt that their vocational-technical background was beneficial to them regardless of whether they were in agricultural-related or nonagricultural-related occupations. Of those with agricultural occupations, 58.33 percent thought the interpersonal relationship information was more helpful than technical information learned.
5. No significant relationship at the .05 level could be found between quality of the SOEP and the success of respondents with agricultural-related occupations or nonagricultural occupations.

Ishaya, J.B. (1983). An extension demonstration using broiler chicks as a model. Masters thesis. Utah State University, Logan.

This test demonstration was intended to develop a modern management program to improve broiler production in Nigeria through extension teaching methodology. The management programs include animal health, nutrition, and general care.

Some of the factors that limit broiler production in Nigeria are associated with the management strategy presently adopted by Nigerian subsistence farmers.

This report considers the effect of different protein sources on broiler nutrition and the techniques necessary to get

the farmers to practice the result of up-to-date research findings.

The extension teaching demonstration reported here is based on 60 day-old chicks. Chicks were randomly assigned to two pens, Pen A and Pen B at the Utah State University poultry farm. Pen A had 40 chicks and Pen B had 20 chicks. Chicks in Pen A received Diet #1 (corn-soybean meal). Chicks in Pen B received Diet #2 (corn-cottonseed meal).

Chicks were weighed weekly starting on July 2, 1983, which was the third week of the demonstration. The difference between the weekly weight gained was obvious. Birds fed corn-soybean meal diet were superior to those fed corn-cottonseed meal diet. The birds in Pen A were marketable at eight weeks whereas those in Pen B were not marketable at the same chronological age.

A field day was conducted at the poultry farm to report the results of the demonstration.

Mohammed, A.A. (1984). Effect of weeding intervals on tomato production. Masters thesis. Utah State University, Logan.

The purpose of this study was to determine the effects of weeding intervals from the onset of the experiment until its termination. Tomatoes were used in the experiment. The variety planted was DX-52-12.

The statistical analyses, as well as observations, revealed that one weeding by hoe every three weeks in the tomato field has proven to be the best treatment. The highest fruit production was obtained from weekly weeding of the tomato field. Weekly weeding of the tomato field is not economically feasible. The labor cost upsets the production differences between weekly and biweekly weedings. Since there is not a significant yield difference between one weeding every two weeks and one weeding every three weeks, it is recommended that weeding a tomato field once every three weeks by hoe be used. Once a week weeding may be used in the home garden, where no labor cost is involved.

Saingbe, N.D. (1984). Use of plastic mulch to enhance maturity, production, and quality of Utah yellow sweet Spanish onions. Masters thesis. Utah State University, Logan.

Utah Yellow Sweet Spanish Onion Seedlings (720), sets (720), and seeds (.03 lb.) were grown on clear plastic mulch, black plastic mulch, and with no treatment. Maturity was determined by observing over fifty percent of the entire plant population in the experiment with tops falling over. Yield was taken from each treatment, bulbs were counted immediately at harvest. Two days later, to insure that there was no debris or foreign matter attached to the bulbs, weight for each treatment was recorded.

A price of 38 cents per pound was assigned at the harvest time to the ungraded harvested onions. Results show that bulbs from transplanted seedlings under black plastic had the highest amount of weight and matured fully followed by those under clear

plastic, while those in the control yielded least under this method of planting but higher than the same treatment planted with sets or seeds.

Ukpe, B.P. (1983) 1982 grain corn demonstration in Cache Valley, Utah. Masters thesis. Utah State University, Logan.

The author grew corn in Cache Valley for the sole purpose of gaining practical experience in planning, conducting, and evaluating a field demonstration and to report the findings to farmers in the area.

This report is based on the results of growing 22 varieties of grain corn on a plot of land 385 feet long and 110 feet wide. Two rows of each variety of corn were planted. Spaces between rows was 36 inches and 6-1/2 inches between plants. Planting was done on May 25, 1982. The harvest dates were October 11 and 18, 1982. The corn had been frozen prior to harvest. Yield, weight, and instructional value of each variety of corn were determined from three random samples taken per variety.

Ulusso, A.M. (1984) A study of the adaptability of five grain sorghum varieties to the Cache County area in Utah. Masters thesis. Utah State University, Logan.

The purposes of the study were to: (1) determine the adaptability of grain sorghum in Cache County, (2) identify highest yielding sorghum variety, and (3) report test results to local farmers in Cache County.

The varieties tested were from Northrop King and Pioneer--NK 125, NK 129, Pioneer 894, Pioneer 8855, and Pioneer 8790. These were planted in four rows 800 feet long. The test was conducted on a half-acre plot at Utah State University experiment station, in North Logan, Utah.

The yields were compared to one another by calculating bushel per acre yields from the plot data. The varieties were also compared on their dry and moist weights and protein content.

It was found that sorghum was established very easily and that it grew well through the season. There were no problems with insects or weeds.

It was also found that Pioneer 894 and Pioneer 8790 were the highest yielding varieties with approximately 90 bushels/acre. These varieties not only yielded well but they dried down well indicating their maturity was good and they would store very well.

Pioneer 8855 yielded an average of 51.32 bushels per acre. The yields of the Northrop King 125 and 129 varieties were 54.80 and 29.30 bushels per acre respectively. These three varieties yielded considerably less than the two leading varieties.

The results of this trial were presented at a field day September 23, 1983.

VIRGINIA

Camp, W.G. (1984). Microcomputers in agricultural education. Funded project. Virginia Tech, Blacksburg.

The purpose of this project was to prepare, field test, and make available to teachers in Virginia, a series of microcomputer-based instructional modules on technical agriculture subjects. This is a three year project (1983-1986) and will result in a total of 25 microcomputer learning activity packages. An additional purpose is to develop prototype interactive videotape-microcomputer instructional modules for agricultural education. A total of 4 tutorial modules, 7 VisiCalc templates, 1 recruitment program, and 1 score maintenance program were developed in the first year (1983-84). In addition, 10 workshops for 200+ total teachers were conducted throughout Virginia. Workshop topics ranged from basic computer literacy through specialized spreadsheet applications.

Camp, W.G., & Crunkilton, J.R. (1984). History of agricultural education in America: the great individuals and events. Staff study. Virginia Tech, Blacksburg.

The history of agricultural education has been chronicled by numerous studies over the years; at the same time, no effort could be found to identify those individuals who have made the greatest contributions or the events that have had the greatest impact in the profession. This study was an attempt to fill that void. A panel of 40 prominent members of the profession was purposefully selected to represent all parts of the country and all levels of agricultural education. The panel included 10 teachers, 10 teacher educators, 10 state and national administrators, and 10 retirees representing all 3 of the previous categories.

Members of the panel were asked to nominate individuals and events by means of an open-ended mail survey on the first round of the study. Separate lists of individuals and events were then compiled and frequencies of nominations were tallied. Individuals and events receiving multiple nominations were included on the second round survey which asked the panel to rate each nominee on a five point scale. The response rate on the first round was 85%, and on the second round it was 90%.

Legislation emerged as the most frequently cited events, with the Smith-Hughes Act receiving the highest rating and several events relating to the FFA forming the second largest cluster. Teacher educators predominated in the list of most important individuals. The claim to greatness that appeared to

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have most impact in this list was publication, especially of textbooks at both high school and college level. One currently active member of the profession appeared on the list.

Camp, W.G. & Lipman, T. (1984). Microcomputer software for agricultural education. Staff study. Virginia Tech, Blacksburg.

The purpose of this staff study was to identify instructional software available from commercial sources for agricultural education. The result of the study was a monograph listing 213 software packages, each identified by vendor and price. Each of the packages was further identified as fitting (sometimes loosely) into one of the following categories: accounting, crops, educational, equipment/supplies, livestock, management, and quizzes. It also provides the addresses and telephone numbers of 17 software vendors specializing in agricultural education software.

Crunkilton, J.R., Miller, L.E., and Lee, J.S. (1984). A trial study: the image of agricultural education departments at Virginia Polytechnic Institute and State University, The Ohio State University, and Mississippi State University. Staff study. Virginia Tech, Blacksburg.

This study was undertaken to focus on two major aspects of agricultural education; namely an innovative research procedure and a contemporary topic. First, the researchers wanted to conduct a study which could serve as a new strategy for conducting research in agricultural education. The second emphasis was to study a topic of mutual interest to agricultural educators, especially as it relates to teacher education programs. The area selected for study was the image of the teacher education program.

The study represented a collaborative effort of the three researchers. Each individual was responsible for certain steps in the research procedure; e.g., development of questionnaire, duplication of questionnaires, analysis of data. The study was a status study conducted through descriptive design. The instrument collected data about specifics of the teacher education program; e.g., faculty, students, research, mission, teaching, and service. Selection of subjects was through a stratified random procedure from six independent populations, namely faculties in the College of Education and Agriculture at the three institutions.

Selected results were: 1) the combined image of teacher education at the three institutions was moderately positive, and

2) faculty in the College of Education had a significantly higher image of agricultural teacher education than faculty in the College of Agriculture. Recommendations include that: 1) other universities collaborate on research efforts; 2) this study be replicated at other institutions; and 3) effects be identified and implemented to foster a more positive image at all three institutions.

Gordon, H.R.D. (1984). Occupational and educational outcomes associated with participation in agricultural education at the secondary level. Doctoral dissertation, Virginia Tech, Blacksburg.

The occupational and educational outcomes associated with participation in agricultural education at the secondary level were examined in this study. The data for the study were extracted from the federally funded data base resulting from The National Longitudinal Study of the High School Class of 1972 (NLS72). A variety of statistical procedures were used to determine and control for the effects of selected background variables such as size of community, sex, race, education of father and mother, parents occupations, and ability level. Criterion measures used were Duncan Socioeconomic Index for occupational attainment. The variable of interest was semesters of agricultural education completed during high school. Initial data for 1972 and followup data for 1972, 1973, 1974, 1975, 1976, 1978, and 1979 were analyzed.

Major findings were: 1) Agricultural education graduates were more likely to enter agricultural occupations than were nonagricultural education graduates; 2) Agricultural education graduates as a group had a lower postsecondary educational attainment than did nonagricultural education graduates on preliminary analysis; however regression analysis revealed that only .57% (.0057) of the variance in educational attainment was accounted for by participation in agricultural education; 3) For those graduates in agricultural occupations, socioeconomic attainment of agricultural education graduates was lower than that of nonagricultural education graduates in 1 of the 7 years studied. The proportion of the variance associated with participation in agriculture for that year was 2% (.0214). For other years, no significant differences were found; 4) For those graduates in nonagricultural occupations, significant differences in occupational attainment were found in 3 of the 7 years studied, again favoring nonagricultural education graduates. The proportion of the variance of the criterion variable associated with agricultural education ranged from .1% to .2% (.0010 to .0020).

Hillison, J., & Cunningham, D.L. (1984). Concerns of agricultural education and other vocational teachers about implementation of competency-based education. Staff study. Virginia Tech, Blacksburg.

The Virginia Department of Education mandated the use of competency-based education (CBE) by June 30, 1984. Through a review of literature a determination was made to monitor the concerns of vocational education for such an implementation. The objectives of the study were as follows: (a) to monitor the change in expressed concerns about implementation of CBE of agricultural education and other vocational teachers; (b) to compare the expressed concerns about CBE implementation of agricultural education teachers with other vocational teachers, (c) to determine differences in vocational teachers' stages of concern related to the variables of level of education, sex, and age, and (4) to determine differences in vocational teacher's stages of concern related to number of CBE courses taken.

Six school divisions in Virginia were selected to collect the data. A two stage survey was conducted in April and October of 1984. An instrument developed at the University of Texas-Austin Research and Development Center was sent to 362 vocational teachers including 48 agricultural education teachers.

The highest stage of concern for agricultural education teachers was 4.42 (second administration) for consequence. The highest stage of concern for other vocational education teachers was 4.24 (first administration) for consequence. The lowest stage for both groups was 1.39 for awareness at the first administration. Neither group confirmed to the usual pattern of satisfying lower stages of concern and moving to higher stages of concern. The number of courses taken on CBE did influence the information stage by having a significantly lower level of concern for two or more courses taken.

Malpiedi, B.J. (1984). The national FFA Building Our American Communities program: Characteristics of selected 1983 BOAC projects, program participants, FFA chapters, schools and communities. Doctoral dissertation, Virginia Tech, Blacksburg.

The purpose of the study was to examine the BOAC program by describing community development activities, BOAC projects, and characteristics associated with selected students and advisors who participated in the 1983 BOAC program relative to their FFA chapter, school, and community contextual situations. Three survey instruments were developed by the researcher. The population for this descriptive study included the 48 students and 46 advisors who attended the 1983 National Conference on

Community Development. Two major findings of this study included: 1) Benefits to FFA members and vocational agriculture programs represented the major program outcomes. The outcomes were increased citizen participation, increased human relations skills of members, and increased public awareness of the vocational agriculture program; 2) Students and advisors involved numerous individuals and groups in their projects which primarily improved the following community sectors: school/education, civic facilities, agriculture, and recreation. In conclusion, the activities of the BOAC participants in this study reflected an attempt to meet the intent of community development through the use of volunteers conducting community service activities. The project activities complemented by instructional activities enhanced the opportunity for students to learn the community development process and the agricultural needs of the community.

McMillion, M.B. (1984). Agriculture and horticulture in the secondary schools in the southern education region of New Zealand. Research project. Lincoln College, Canterbury.

The purpose of the study was to learn how agriculture was taught in the secondary schools of New Zealand. Specifically, the purposes were to ascertain the status of teacher preparation, school facilities, teaching resources, students served and teaching practices, including the use of practical work and projects.

Personal interviews with teachers, using an interview schedule was the means of data collection. Interviews were conducted at all thirty-five schools having agriculture and/or horticulture in the southern one-third of New Zealand. Forty-eight of 50 teachers were interviewed. The study was a descriptive one.

Teachers varied from well prepared to poorly prepared. About half were well prepared. The science laboratory was the most commonly used classroom. Thirty-five percent of the schools had some kind of animals and some land. All horticulture schools were using garden plots.

Thirty-one percent of student enrollment was girls. Enrollment of girls was 34 percent in horticulture and 27 percent in agriculture.

Teachers were in agreement that an objective in teaching was to help students do well in the school certificate examination. Horticulture teachers ranked "performing skills" highly as an objective and agriculture teachers ranked "discovery of scientific principles" highly.

Students in horticulture received about twice as much practical work as did agriculture students. Practical work away from school was required of all students in only a few schools.

Rush, M.G. (1984). The relationship between teacher effectiveness and beliefs of Virginia agricultural teachers. Doctoral dissertation. Virginia Tech, Blacksburg.

The purpose of this research was to investigate the relationship between teacher effectiveness and agreement with the philosophy adopted by the Agricultural Education Division of the AVA. The study also investigated the relationship between teacher effectiveness and the strong beliefs about quality vocational agriculture programs held by teachers.

The primary subjects for this study were agriucltural teachers in Virginia identified by state supervisors of vocational agriculture and verified by selected teacher educators in agricultural education as the most and least effective agricultural teachers. A total of 40 teachers were identified as most effective and 33 were identified as least effective.

Selected conclusions drawn from the findings were: 1) The philosophy adopted by the Agricultural Education Division, AVA does not contain the beliefs most likely to distinguish between the most and least effective teachers; 2) There are beliefs not included in the philosophy adopted by the profession that do seem to be related to teacher effectiveness; 3) the most effective teachers are more likely to express beliefs about the teacher being the key to effective programs while the least effective teachers are more likely to express beliefs about external factors being the key to effective programs; 4) Additional education is a better predictor of teacher effectiveness than either age, experience or agreement with any of the specific concepts adopted by the profession.

Padelford, S. and Cvancara, J.G. (1984). A Grape Production Guide for Vocational Agriculture Instructors in Washington. Masters Degree Special Problem - Curriculum. Washington State University, Pullman, WA

This study was developed to assist teachers of vocational agriculture with an up-to-date, easy-to-use resource dealing with grape production in Washington State. This guide is divided into units representing major areas in the grape industry and includes an introduction, infromation sheet, test and answer sheet for each unit.

Brown, K.A. and Kleene, M.D. (1984). An Electronic Record Keeping System and Support Curriculum for Vocational Agricultural Education Students in Washington State. Masters Degree Special Problem - Curriculum/ Computer software Development. Washington State University, Pullman, WA

This project was designed to meet the needs of students impacted by changing technology in vocational agriculture. This curriculum guide was developed to support a computer based electronic record keeping system which is simple to use but meet the new format requirements of the FFA American Farmer Degree and National Proficiency Award applications. The curriculum guide will be published with the software and will be commercially available.

Kleene, M.D. and Foster, R. (1984). Instruction of Selected Agricultural Economic Principles for Secondary Vocational Agriculture Students, A Computer Assisted Instructional Tutorial. A software development project funded by the Apple Education Foundation, Cupertino, CA. (c) Washington State University, Pullman, WA.

This series of programs contain a self paced interactive tutorial designed to introduce and extend the ability of high school students to learn about selected agriculture economic principles. The goal of this program is to provide a unique learning opportunity for students interested in the world of agribusiness.

The four principles are a) law of supply and demand, b) law of diminishing returns, c) law of fixed and variable costs and d) opportunity costs. This program is written in Applesoft (tm) basic and is commercially available.

Dickerman, Gregory, R. (1983). Development and Analysis of a Corn Production Achievement Test for Wisconsin Vocational Agriculture. M.A.T. Thesis. University of Wisconsin, River Falls.

Purpose. The primary purpose of the study was to develop and analyze a corn production achievement test for Wisconsin vocational agriculture students. The secondary purpose was to examine the relationship between test scores and the: (1) student's average agriculture grade; (2) sex of students; and (3) farm and non-farm background of students.

Method. The 44 item test was constructed in review of major crop production textbooks used in Wisconsin vocational agriculture departments. A field test survey was conducted in selected vocational agriculture departments to validate length and readability. The identified population for the study was obtained from a random sample of 15 percent of the 272 vocational agriculture departments in Wisconsin. The sample was divided into two subdivisions and classified as vocational agriculture departments with over 50 percent enrollment of farm students and departments with over 50 percent enrollment of non-farm students. The test was administered to 283 junior and senior students in 15 Wisconsin vocational agriculture departments that agreed to participate in the study. A total of 36.5 percent of the tests were returned.

Findings. The major conclusions of the study were: (1) The item analysis revealed that most test items were discriminating in their ability to contribute to the student's test scores. (2) The test results acknowledged that it was possible to develop a valid and reliable test instrument to measure the comprehension of basic concepts in corn production held by Wisconsin vocational agriculture students. (3) A significant difference was found between test schores of students and their reported average agriculture grade. Evidence supported that the students' average agriculture grade had an impact on test scores. (4) There were no significant variations observed between test scores of male and female students. (5) Seedbed preparation was one subdivision of the test that students from farm departments scored significantly higher on than students from non-farm departments.

Gondert, Ann Marie (1984). Accommodating Special Needs Students Enrolled In Secondary Vocational Agriculture Programs In Wisconsin. M.A.T. Thesis. University of Wisconsin-River Falls.

Purpose. The purposes of this study were to determine (1) problems vocational agriculture teachers in Wisconsin may have in

accommodating special needs students and, (2) the types of Supervised Occupational Experience programs in which special needs students participate.

Method. A three part questionnaire was developed and sent to all (318) secondary vocational agriculture teachers in Wisconsin. The first part was designed to obtain general characteristic information about the teachers and their vocational agriculture program. Part II consisted of twenty-four problem statements about accommodating special needs students which the teachers rated on a five point Likert scale. Part III consisted of open-ended questions concerning Supervised Occupational Experience programs and Proficiency Award areas for special needs students. Five hypotheses were tested using One-Way Analysis of Variance and Multiple Regression Analysis.

Findings. Testing of the hypotheses indicated that the variable "program emphasis" most influenced the teachers' rating of the problem statements. Further analysis indicated "having adequate time to develop and individualized instructional program for the special needs students" and "having adequate time to guide and council special needs students with SOE's" were rated by the teachers as the more serious problems. The teachers listed various production programs as the most common types of SOE programs in which their special needs students participated. "Parent's attitude" and "student's attitude" were reported by the teachers as the major contributing factors to the special needs students non-participation in a SOE program. "Placement in Production Agriculture" and "All Areas" were listed by the teachers as the Proficiency Award areas in which they felt special needs students would be most successful.

Ogbozo, Anthony Maria Chukwukaodinaka (1984). Assessment of Selected Agricultural Schools in Anambra and IMO States of Nigeria. M.A.T. Thesis. University of Wisconsin-River Falls.

Purpose. The research problem of the study was to assess the vocational agricultural programs in six selected Nigerian schools. The assessment was based upon the students' and teachers' perceptions of the programs according to selected United States standards and guidelines. Research subjects completed a 38-item questionnaire eliciting personal information and opinions or perceptions of students' and teachers'/administrators' on the importance of selected categories of the United States' standards and guidelines. The data was analyzed to compare the six Nigerian vocational agricultural schools and identify specific characteristics of the six schools.

Method. Two hundred and forty questionnaires were distributed to six vocational agricultural schools in Anambra and IMO

states of Nigeria. Each of the six schools received forty questionnaires - thirty questionnaires for students, and ten for teachers/administrators. A research instrument (questionnaire) was used in the study. Part A of the questionnaire consisted of seven items of personal information: gender, tenure, experience, age, marital status, salary and fringe benefits. Part B consisted of 31 items pertaining to students and teacher's/administrator's perceptions on instructional programs, leadership development, supervised occupational experience programs, staffing, administration and supervision, and facilities and equipment.

Findings. Factors that may have influenced the findings of this study include a possible limited knowledge of western educational programs by the research subjects, the relatively small sample size (240 subjects), and the computation and use of the statistical package for Social Science (S.P.-SS). There was a significant difference shown in almost all of the data analysis done. There was a significant differnece in the perception of the selected United States standards and guidelines. There was a significant difference on specific characteristics of the six Nigerian vocational agricultural schools. The study showed a need for more females in vocational schools, opportunities for in-service training, faculty members writing books, fund increase for providing reference books, teaching aids, technical equipment, etc., accelerated salary for teachers, scholarship for teachers and students, cooperation from organizations and agencies, hiring of better faculty, and constant review of the programs.

Smith, Thomas B. (1983). Survey of Instructional Computer Use in Wisconsin Secondary Vocational Agriculture Departments. M.A.T. Thesis. University of Wisconsin-River Falls.

Purpose. The population of the study were 325 vocational agriculture instructors teaching in secondary schools in the State of Wisconsin. Completed questionnaires were received from 238 (73.2%) instructors. The independent variables were: (1) years of vocational agriculture teaching experience; (2) size of school; (3) educational level of the vocational agriculture instructor; and (4) type of computer training the vocational agriculture instructor had acquired. The dependent variable was frequency of instructional computer use (in five subject areas): (1) Agricultural Economics; (2) Agricultural Engineering; (3) Agronomy/Horticulture; (4) Animal Science; and (5) Soils.

Findings. An analysis of the data revealed a significant relationship between the educational level of the instructor and the use of micro-computers between the education level of the instructor and the use of timeshare computers as an instructional aid. The educational level of the instructors who desire to use

micro-computers for computer enhanced learning is a significant variable, particularly for Agricultural Economics, Agricultural Engineering, and Agronomy/Horticulture.

Demographic data indicated that of the 238 instructors who replied, 68% had been teaching fifteen years or less, and 49% had acquired some computer training. Conversely, 50% of the instructors has acquired no computer training. However, 83% of the instructors had access to micro-computers. Of the micro-computers which were available 61.34% were Apple computers, while 22.27% were Radio Shack computers.

Generally, computers are available for the vocational agriculture instructors. However, computers are not yet being used as an aid to instruction to any great degree.

WEST VIRGINIA

Effendi, M. N. (1984). Crops information needs of farmers as perceived by selected West Virginia farmers, county extension agents and vocational agriculture teachers. Masters thesis. West Virginia University, Morgantown.

This study was designed to determine crops information needs of West Virginia farmers. Data were obtained through questionnaires from 145 farmers selected by extension agents, 50 extension agents, and 62 vocational agriculture teachers in West Virginia. The most important information needs as perceived by respondents were (a) cost/profit analyses of production practices, (b) insect, disease and weed control in field crops and vegetables production, (c) pasture management practices, (d) lime and fertilizer asage in field crops production, and (e) no-tillage farming practices. Vocational agriculture teachers perceive that farmers have a much greater need for crops information than do county expension agents and farmers.

Higgins, C. M. A. (1984). A study to determine attitudes and practices of West Virginia vocational agriculture teachers toward enrollment of female students. Masters thesis. West Virginia University, Morgantown.

This study was conducted to determine if sexual discrimination practices are being used by West Virginia vocational agriculture teachers to limit enrollment of girls in classes. Data were collected by questionnaire from 89 of the 108 teachers surveyed (82.4 percent). Respondents indicated that both boys and girls who show an interest in agriculture should be enrolled in vocational agriculture and that most teachers make a sincere effort to

recruit females into classes. Teachers feel that boys do better than girls in agricultural mechanics but that girls do better than boys in horticulture. Females are somewhat discouraged from enrolling in vocational agriculture by parents, peers, guidance counselors, teachers and administrators.

Lulandala, G. G. D. (1983). Effectiveness of the Tanzanian Ministry of Agriculture Training Institutes as perceived by tutors and principals. Masters thesis. West Virginia University, Morgantown.

This study was designed to ascertain effectiveness of various aspects of MATIs as perceived by tutors and principals of those training institutions. Data were obtained from tutors and principals through use of questionnaires. More than 90 percent of the population completed and returned questionnaires for use in the study. Problems identified by participants touch nearly every area of training. Considered particularly serious were lack of inservice refresher courses, study tours and field attachments; lack of adequate transport; visual aids software; lack of practical training facilities, and lack of advancement opportunities. MATI training was considered relevant to current needs and problems of farmers.

Mndebele, C. B. (1983). College supervisors' perceptions of the student teaching program in Swazilard. Masters thesis. West Virginia University, Morgantown.

The purpose of this study was to obtain data which would offer a clear picture of contemporary student teaching programs and elicit perceptions of college/university supervisors regarding student teacher program improvement in Swaziland. Supervisers were surveyed by means of a common questionnaire. Responses were obtained from 60 of the 100 teacher educators surveyed. It was found that the person in charge of student teaching is generally known as the Head of Department, however, preference was for the title of Coordinator. Ten weeks of student teaching is most common and is the preferred duration. It was felt that cooperating public school teachers should be rewarded in some way for their contributions. Causes of student teacher failure were found to be poor teaching methodology, poor mastery of subject matter, and unwillingness to work hard.

Reksohadiprodjo, F. S. (1984). Problems perceived by field extension workers in conducting Training and Visit System in South Sulawesi, Indonesia. Masters thesis. West Virginia University, Morgantown.

Objective of this study was to identify Field Extension Workers' (FEWs) problems in conducting extension activities through the Training and visist (T&V) System in South Sulawesi, Indonesia. Data were obtained from 183 respondents, representing

71.5 percent of the FEWs in the five selected districts, through the questionnaire technique. Respondents indicated that the organizational structure of the Rural Extension centers and District Sub-Sectoral Services were not impediments to their work. Training facilties and reading materials were considered adequate. Respondents were satisfied with the trainers' knowledge and skill in agriculture and their teaching methodology. Fulfillment of visit schedules and farmers' attendance at visit sessions were not considered to be problems. In general FEWs who spoke the local dialect, came from farm families, and had farming experience were more positive regarding farmers' response to extension activities.

Shongwe, S. P. M. (1984). Professional education competencies perceived most important for beginning agriculture teachers in secondary/high schools in Swaziland. Masters thesis. West Virginia University, Morgantown.

The primary purpose of this study was to assess the importance of professional education competencies and to evaluate the competence of newly employed agriculture teachers in Swaziland. Perceptions of principals, coordinators, teacher educators and teachers of agriculture were sought regarding 32 selected competencies through the questionnaire technique. Overall, 47 percent of those asked to participate returned completed questionnaires for use in the study. All 32 professional competencies were perceived important, the highest ratings being given to subject matter mastery by teachers. Beginning teachers are perceived to lack competence in the areas of instructional planning, teaching methods and techniques, management, leadership and organization. It was concluded that preservice and inservice education should be strengthened in those areas.

Simelane, J. M. (1984). Vocational agriculture teachers' and their administrators' perceptions concerning activities/tasks performed in vocational agriculture programs in West Virginia senior high schools. Masters thesis. West Virginia University, Morgantown.

This study was designed to determine how strongly West Virginia vocational agriculture teachers and their administrators believe in selected activities and aspects of vocational agriculture, and how well they perceive the activities/tasks are being performed. Data were obtained through questionnaires completed by 73 vocational agriculture teachers, 43 principals, and 28 county vocational directors. The strongest belief expressed by both groups concerned the maintenance of classroom discipline. Very strong beliefs were also expressed for working harmoniously with other teachers, in holding an annual parent-member banquet, and in need for gaining confidence and respect of the farm/agribusiness community. Teachers expressed significantly greater belief than

administrators in nearly every aspect of SOEP, and on insisting that each student become an FFA member. Administrators expressed much stronger beliefs than teachers in involving students in FFA activities--contests, conventions and proficiency awards--and in need for holding a meeting with parents of first-year students. Neither group expressed great belief in expecting students to earn substantial sums of money through SOEP. Both groups rated the FFA parent-member banquet as the activity teachers do best. Four items were rated low in performance: helping students find employment upon graduation; placement of students in local businesses; the freshman parent meeting; and the expectation of substantial earnings by senior students.

Yokum, J. W. (1984). Perceived attitudes of vocational agriculture students' parents toward the vocational agriculture programs in Jefferson and Berkeley Counties of West Virginia. Masters thesis. West Virginia University, Morgantown.

The purpose of this study was to determine parental attitudes toward vocational agriculture programs in Jefferson and Berkeley Counties, West Virginia. Data were obtained from 115 sets of parents in the two county area through the questionnaire technique. The majority of parents consider all instructional areas important, but feel that teaching of subject matter areas needs to be strengthened. Parents were particularly concerned with adequacy of agricultural mechanics and farm/agribusiness management teaching. Nearly all parents consider the information taught in FFA and vocational agriculture useful and activities to be valuable to their children. Parents want their children involved in judging contests, camps and other activities. Overall, 73 percent of the parents rated the vocational agriculture and FFA program good.

RESEARCH AND DEVELOPMENT ACTIVITIES IN PROGRESS

FLORIDA

Arrington, L.R. An analysis of 1983 state FFA degree recipients in Florida. University of Florida, Gainesville.

Bradshaw, J. An assessment of the need for extension programming for retail garden center personnel. Master's thesis. University of Florida, Gainesville.

Coker, B.A. Relationship of perceived effectiveness of advisory committee members and motivation for participation. Masters thesis. University of Florida, Gainesville.

Cheek, J.G. & McGhee, M.B. Career patterns of agricultural and extension education majors at the University of Florida. Agricultural and Extension Education. University of Florida, Gainesville.

Curry, T.L. & Waltz, F.C. Adequacy of competencies developed by completers of agribusiness and natural resources education programs as perceived by their employers. Staff study. Department of Agricultural and Extension Education. University of Florida, Gainesville.

Maday, J.A. Develop and field test written and performance student achievement measures for landscape operations. Division of Vocational Education, Florida Department of Education. University of Florida, Gainesville.

McCall, T.M. Development of curriculum materials for crop production in Florida. Florida Department of Education. University of Florida, Gainesville.

IDAHO

Ledington, R.L., and Slocombe, J.W. Factors limiting student participation in supervised occupational experience as perceived by Idaho vocational agriculture instructors. Master's thesis. University of Idaho, Moscow.

Pristupa, D.W., and Slocombe, J.W. Factors associated with supervised occupational experience programs in Idaho. Master's thesis. University of Idaho, Moscow.

Slocombe, J.W. Status of supervised occupational experience programs in Idaho vocational agriculture. Staff study. University of Idaho, Moscow.

Slocombe, J.W. Assessment of leadership, citizenship, cooperation, and self-confidence skills possessed by students entering the College of Agriculture. Staff study. University of Idaho, Moscow.

ILLINOIS

Abolaji, Grace. Inservice Needs of Nigerian Form 5-8 Vo-ag Teachers. Masters study. Southern Illinois University, Carbondale.

Adreti, Rasaki. Ag Math Applications of the Microcomputer. Masters study. Southern Illinois University, Carbondale.

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Galle, Jeff. Needs of Microcomputing Competencies of Community College Agriculture Teachers. Masters study. Southern Illinois University, Carbondale.

Kabat, John. High School Students Awareness of Rend Lake College's Agriculture Program. Masters study. Southern Illinois University, Carbondale.

Nyamal, John. Inservice Needs of Kenya Ag Extensions Staff. Masters study. Southern Illinois University, Carbondale.

Oetting, William. Introductory Spread Sheet Curriculum for High School Vo-ag Programs. Masters study. Southern Illinois University, Carbondale.

Reneau, F.; Noel, Rita; and Hahn, Dave. Computer Equipment Repair V-TECS Project. Computerized Numeric Control V-TECS Project. Illinois State Board of Education, Springfield, and Southern Illinois University, Carbondale.

Schmitz, Donald F. Determination of the Literacy of Vocational Agriculture Students. Masters study. Southern Illinois University, Carbondale.

Tatham, Kevin. Microcomputer Curriculum for Community College Vocational Agriculture Programs. Masters study. Southern Illinois University, Carbondale.

Wells, Joe. A Determination of Preservice Education and Extension Methods Needs For Extension Agents. Masters study. Southern Illinois University, Carbondale.

Zakaria, Kamarudin. Adoption of Agricultural Innovations in a Malay Farming Community. Masters study. Southern Illinois University, Carbondale.

Flowers, J.L. Technical animal science competencies possessed by Illinois vocational agriculture teachers. Masters Equivalency Study, University of Illinois at Urbana-Champaign.

Kaczor, C.T. Academic achievement of agricultural mechanics students using computer-assisted versus written review and testing. Doctoral dissertation, University of Illinois at Urbana-Champaign.

Law, D.A. Illinois Extension adviser's perceptions of their job and need for additional training. Doctoral dissertation. University of Illinois at Urbana-Champaign.

Osborne, E.W. Use of the Problem Solving Approach by Illinois Vocational Agriculture Teachers. Staff study. University of Illinois at Urbana-Champaign.

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Pepple, J.D. High School Principals' Attitudes Toward the Goals and Objectives of Vocational Agriculture in Illinois Comprehensive High Schools. Staff study. University of Illinois at Urbana-Champaign.

IOWA

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Carter, R.I. Community organizations and their role in the leadership development of youth. Staff study. Iowa State University, Ames.

Carter, R.I. Profiles of entering students in agricultural education from 1980-1984. Staff study. Iowa State University, Ames.

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Gamble, K.J. Occupational and educational aspirations of vocational agriculture students compared with those of nonvocational students. Doctoral dissertation. Iowa State University, Ames.

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Hamilton, P.C. A static model for determining needed agricultural economic programming for extension agents with application in eleven counties of Northwestern Oklahoma. Doctoral dissertation. Iowa State University, Ames.

Haskell, L.J. Future directions of the Cooperative Extension Service as perceived by extension personnel and selected public leaders in Iowa. Doctoral dissertation. Iowa State University, Ames.

Johnson, C.A. Components of leadership development through 4-H programs and their implementation. Masters thesis. Iowa State University, Ames.

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Jones, R.L. An assessment of use and attitudes toward cognitive skill development among agricultural education professors at land-grant colleges and other selected high education institutions. Doctoral dissertation. Iowa State University, Ames.

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Miller, W.W. An evaluation of the effectiveness of video-cassette modules in influencing students' perceptions of selected teacher characteristics. Staff study. Iowa State University, Ames.

Ngesa, F.U. Farmer's training centers: contribution to extension effectiveness in Kenya. Masters thesis. Iowa State University, Ames.

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Pike, W. Education and farm policy. Master of arts paper. University of Minnesota, St. Paul.

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Chandrapatya, S. The interrelationships among leadership style, locus of control, and other characteristics of Extension county leaders within the Mississippi Cooperative Extension Service, Mississippi State University, Mississippi State.

MISSOURI

Linhardt, R.L., & Morton, C. Utilizing a guided-bend test in teaching welding to inservice teachers. Staff study. University of Missouri-Columbia.

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Shelhamer, C. Van. Computer Assisted Instruction in Feeds and Feeding. Montana Office of Public Instruction, Montana State University, Bozeman.

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Berkey, A.L. and Sutphin, H.D. The northeast change strategy for supervised occupational experience programs in agriculture. Staff study. Agricultural and Occupational Education, Department of Education. College of Agriculture and Life Sciences. Cornell University, Ithaca.

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Smith, D.G., & Harper, J.G. Analysis of wood stove construction in vocational agriculture and industrial arts shops. Staff study. University of Nevada-Reno, Reno.

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Adams, W.H., Jr. A study of occupational competencies needed for entry-level employment as agricultural equipment mechanic for maintaining and repairing tractors, crop combines and balers. Doctoral dissertation, North Carolina State University, Raleigh.

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Year	Regions			
	Central	North Atlantic	Pacific	Southern
1968-1969	ED 036 642		ED 036 635	ED 038 543
1969-1970	ED 047 107	ED 047 108	ED 147 110	ED 047 109
1970-1971	ED 057 252	ED 061 415	ED 061 447	ED 061 446
1971-1972	ED 076 800	ED 107 904	ED 078 164	ED 079 472
1972-1973	ED 103 694	ED 107 903	ED 109 376 (1972-1974)	ED 110 745
1973-1974	ED 110 660	ED 110 792		ED 110 746

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NATIONAL SUMMARIES (1974-1982)

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1976-1977	ED 151 532
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1978-1979	ED 187 894
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1980-1981	ED 223 774
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1975-1976 - Dr. J. David McCracken, The Ohio State University
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1977-1978 - Dr. Alfred J. Mannebach, The University of Connecticut
1978-1979 - Dr. Jimmy G. Cheek, The University of Florida
1979-1980 - Dr. Jimmy G. Cheek, The University of Florida
1980-1981 - Dr. Joe W. Kotrlik, Louisiana State University
1981-1982 - Dr. Joe W. Kotrlik, Louisiana State University
1982-1983 - Dr. William G. Camp, Virginia Tech

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